

RezEdREVIEW

The Hub for Learning and Virtual Worlds

RezEd.org



A product of:

Spring 2009

Volume 2. Issue 1.



Global Kids®

RezEd

RezEd: The Hub for Learning and Virtual Worlds

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Additional copies of this report can be found at <http://www.RezEd.org>.

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RezEd was developed by Global Kids, an independent educational nonprofit organization that educates and inspires urban youth to become successful students, community leaders, and global citizens. It launched after being selected through the HASTAC competition and is made possible through continued support from the MacArthur Foundation.

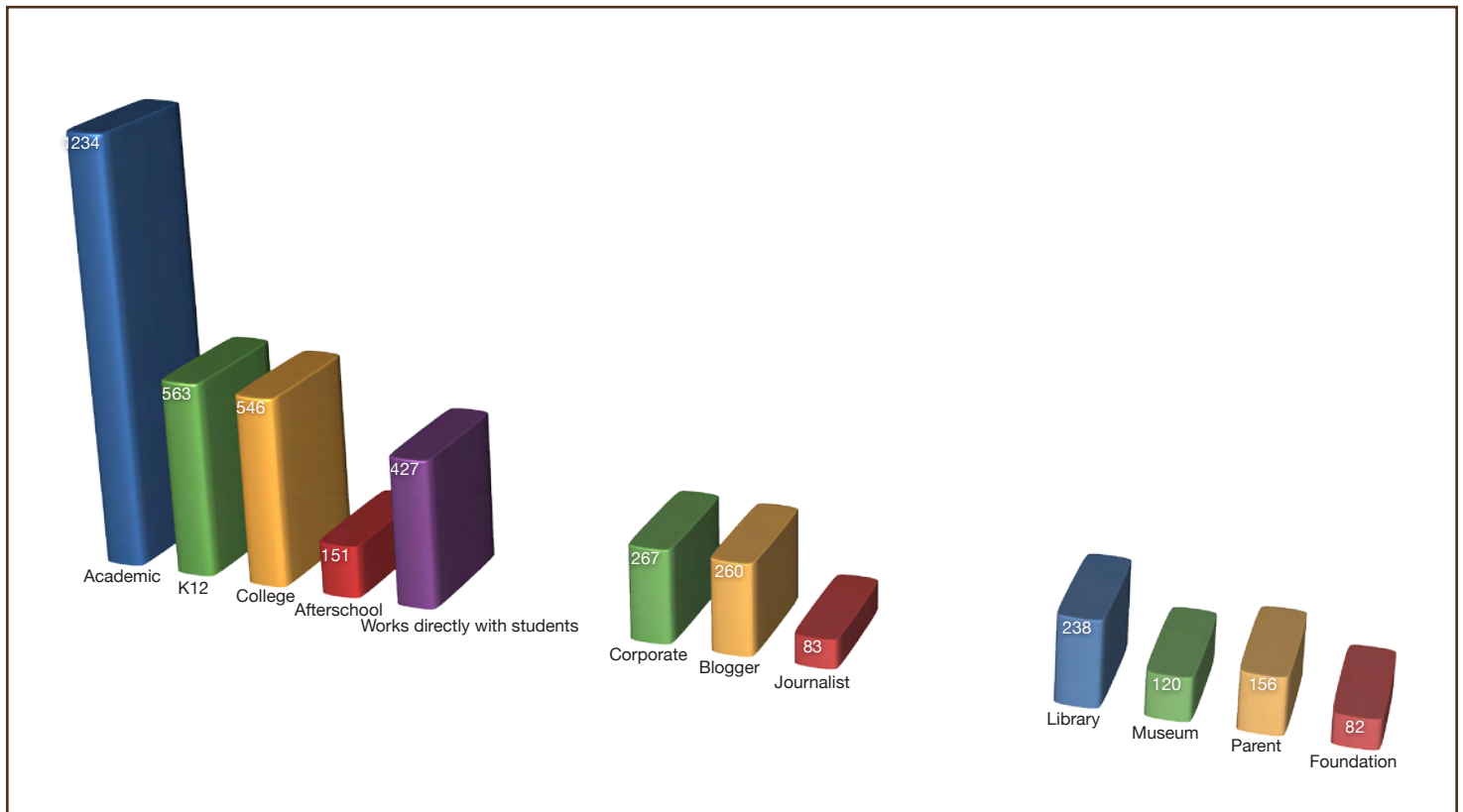
RezEd is a community of practice that brings attention to the myriad ways virtual worlds are being used for learning in various settings. It covers both commercial and educational virtual worlds through news updates; multimedia resources; a podcast series with youth, theorists, world builders, practitioners and experts in the field; "Aha Moments" written by the community, digital media resources, guest-moderated discussions, and more. In addition, knowledge is generated and shared as members contribute photos and videos, facilitate special interest groups, and manage personal blogs.

Welcome to the 2nd RezEd Review!

This publication highlights the diverse perspectives of over two dozen experts who have spoken to the RezEd community in its bi-weekly podcast series. This review will give insight in to the research, public policy, and educational change across virtual worlds. Interviews include experts covering a range of virtual worlds, including Quest Atlantis, Dizzywood, There.com, Panwapa, Club Penguin, Project Wonderland, River City, Google's Lively, and BarbieGirls. In addition this review will cover the history and practice of learning and Second Life through interviews with Robin Harper, Sarah Robins, Peggy Sheehy, and more. Lastly, the review covers the voices of both parents and youth through the interviews of both, as well as Linda Burch of CommonSense Media.

RezEd, the Hub for Learning and Virtual Worlds, provides practitioners with access to high quality resources and research in the field to establish a strong network among those using virtual worlds for learning. Launched in beta in mid-March of 2008, RezEd is a comprehensive resource for teachers, parents, librarians, after school educators, and those simply interested in utilizing these increasingly popular tools and tracking the growth of this emerging field.

RezEd Member Profiles



This chart illustrates a snapshot of RezEd member profiles as of March 2009 when RezEd.org had a total of 1703 community members. Community members can identify with multiple profiles.



Big Picture: Research, Public Policy and Educational Change

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"Mr. Pixel goes to Washington" - The Congressional Hearings on Virtual Worlds



Larry Johnson, CEO of the New Media Consortium, which is a not-for-profit association of more than 250 colleges, universities, and museums that look at emerging technologies, talks about his presentation at the virtual worlds hearing at the U.S. Congress, on April 1st, 2008.

Podcasted on April 21, 2008.

<http://tinyurl.com/RezEd-org-1>

On the Congressional Hearings on Virtual Worlds

The House Subcommittee on Telecommunications and the Internet controls the regulations around cell phone networks and around the backbone of the internet itself. They were interested in trying to understand where the emerging universe of virtual worlds is going. Many people talk about it as the 3D web and so they invited myself, a pretty brilliant guy named Phillip Rosedale, who was the inventor of Second Life, as well as Colin Parris, the Vice President from IBM, and Susan Tenby who works a lot with not-for-profits and Second Life. They asked the four of us to give an overview: Phillip about the environment itself, Colin presented the perspective of business, I presented the perspective of education and Susan presented the perspective of the non-governmental, not-for-profit sector.

I really felt that it was an important opportunity. In fact, I was surprised by how I approached it. It's not like I don't have the opportunity to convey my thoughts in public; I do it virtually everyday. But I found it somewhat humbling to go to the Congress. My membership actually had a little bit of fun with it when we took the Frank Capra poster, Mr. Smith Goes to Washington, and they made it up with my avatar's image: "Mr. Pixel goes to Washington."

But in fact, it was a much more serious undertaking and so

I spent a lot of time preparing -- far more than I might on any other kind of paper -- because I felt like that the voice of education really needed to be heard by that group. I wanted to ensure that the dialogue that we had was a serious one and that they knew that the opportunities for teaching and learning in virtual space were profound.

And so I literally reached out to our membership, which includes thousands of people at hundreds of universities, to help me to think through it and [I] spent about three weeks framing the case to be made. I wanted them to look out to the future and to enable it [education in virtual worlds] rather than to restrict it. So often, politicians want to bolt things down and put fences and boundaries around them. I wanted to convey to them a sense of the space and the opportunity and sense of what they could do.

How NMC Got Into Virtual Worlds

The Horizon Reports are something that we at the New Media Consortium do every year. In January of each year we publish the Horizon Report and it looks to the future and profiles six emerging technologies that we think are going to be very interesting. We use an advisory board that typically involves people from at least a dozen countries, so we try to make it be a global perspective, cross-sector and not just education, but very much focused on education as the purpose of the report. This is our fifth year and it's grown to be easily the most influential report for higher education that's out there. One reason is it's very succinct. It's just thirty-two pages and each of the technologies profiled in a very brief format, rich with a lots of links and stuff.

Each year we pick one of the technologies and build a demonstration project around it, which is how we got into Second Life. In 2006, colleges and universities were beginning to really pay attention to educational gaming and we decided to build a project and ultimately settled on Second Life. We bought an island and the next thing we knew we have nearly a hundred islands and our project is self-sustaining and easily the largest educational effort around.

The Role of Congress

I spoke to the things that great Congresses of the past had



done and looking back over US history, you know, when the United States was expanding westward, there was a federal land grant program that created what we call the Land Grant Colleges of the Morrill Act that created hundreds of universities in the emerging territories and, eventually, in every state in the Union. If you could point to a single visionary act of Congress, that is one of the reasons why the American higher education system is so well regarded, it was that investment in the future generations of America.

“ I found it somewhat humbling to go to the Congress. ”

I really felt that Congress needed to be thinking about it in that way, the same way that they made the investment with the GI Bill with soldiers coming back from WWII. After WWI when the soldiers came back they flooded the economy and we ended up with the great depression. There simply was nowhere for them all to go. With the GI Bill what happened was instead they made an investment in society and sent these folks off to college. Many of them became lawyers and leaders of all kinds. You can point to half a dozen other really influential, really important pieces of legislation that were passed by special Congresses in our history and I wanted to encourage them to be one of those.

The Potential of Virtual Worlds

I believe that, based on the two and a half years that we've been working in our project, we've got more than 7,500 people that we work with everyday in virtual worlds, including more than a hundred institutions. We are seeing that virtual worlds are already bridging borders across the globe and bringing people of many cultures and languages together that are very nearly as rich as face-to-face interactions. In a world that we see today, I think it would be hard for anyone to argue that we don't need to be talking to each other more. It's when we are not talking to each other that we end up in horrific situations that we see around the globe. These worlds are already allowing the visualizations of ideas and concepts in three dimensions that are leading to new insights and deeper learning across the board. And we are already seeing changes in the way that people work, learn, shop and conduct business.

What excites me about it is that the technology is very immature. Just as the World Wide Web unfolded over the last fifteen years to erase the boundaries between us, in many ways as we've all become used to easy communications; we're using SKYPE today in a conversations between the UK and the US; that is just an everyday occurrence. That's actually a pretty special thing that we can just do this for free whenever we want.

It took time for the web to evolve those kinds of tools. It has been fifteen years since Tim Berners-Lee wrote his now famous paper that outlined what the World Wide Web could be. I think over the next fifteen years, the virtual worlds are going to rapidly evolve into a rich three-dimensional extension of ourselves that is really going to change the ways that we do things, simply because it's going to be so easy for us to bridge those borders.

Congress' Reaction

Some of them understood what I said. The fact is that the members of Congress are politicians and they have a self-interest in being re-elected; to do that, they tend to focus on a narrow range of issues that they build their candidacies around. We saw that very clearly in some of the comments. One of the representatives from California spoke to an article that came out that's been largely discredited about Islamic Jihads in Second Life. You know there's just no basis to that. That's really fanning the flames of fear in a way that serves no one. I was fairly disappointed in that. Two other issues surfaced. One was money laundering, speaking to the same fear; it's that politics of fear that I would love to see virtual worlds help to erode. The third thing was also something very fearful, and no one can argue against child predators. That's not something that any of us want to have, but my own feeling is that there's nothing new in the virtual worlds in that regard that's not already taken care of by existing laws that govern the internet. It is carried over the same transmission lines and the same laws will still apply. And so I really felt that was a little bit of a grand standing.

“ Each of us really only got to speak for five minutes and it was a two and a half hour hearing. You can do the math. ”

It was a bit surreal because a lot of the time what was happening in the hearing was Congress talking to us about their opinions on things. Each of us really only got to speak for five minutes and it was a two and a half hour hearing. You can do the math. So that was twenty minutes for the four witnesses and then we had a round of questions and each of the questions was limited to five minutes, so fully an hour and a half of it was statements being made by the members of the committee.

It was a civics lesson on a whole new level.

The New Media Consortium's Future Endeavors

NMC just announced Open Virtual Worlds, which is an extension of the work that we are doing in Second Life to look at other platforms. There're more than seventy virtual world platforms in development right now. Most observers would predict that there's going to be a breakthrough product any time now, and we want to make sure we follow that so we're watching it very closely. But most of all we're going to be continuing to try to push the boundaries on how people think about teaching and learning, in using the network, using virtual worlds, using technology in general. ☺

"School has competition" - The Power of Games for Situated Learning



James Paul Gee, the Mary Lou Fulton Presidential Professor of Literacy Studies at ASU, formerly at University of Wisconsin, discusses his views on virtual worlds, situated learning, Justice Sandra Day O'Connor, and the state of education.

Podcasted on August 11, 2008.

<http://tinyurl.com/RezEd-org-12>

Situated Learning

In these virtual worlds and the game world, we really want to stress that people are producers and not just consumers. Playing a game is already producing because you're making the decisions. In order to play a game intelligently, you have to actually think like a designer. You have to be strategic. You have to think: how did they design this, so that I can use that design to accomplish my goals and to really do something with this game; and so you are already thinking like a producer, like a designer.

“Playing a game is already producing because you're making the decisions.”

It can go much further. Kids can mod games. They can learn the software by which the game is made and they can make their own levels, and they can modify the game. They can build their own games. One major motif, one way to learn, is to produce the curriculum so to speak, to not just simply take it as is. Another one, as a linguist, is a principle of situated meaning. If I am learning new languages, new concepts,

there are really two ways to learn them. One is verbally. You give me a definition. You give me a bunch of text. You give me a bunch of words. So I learn a new word by getting a bunch of other words. That's not really very effective learning. It's what we do in school.

What a game can do is they [the player] can associate a word or a concept not just with other words or with texts, but with actions, images, experience, dialogue, argument, negotiation, goals, so that stuff is married in your mind to a whole world of experience. The word is really clear -- how it attaches to the world to do stuff and to function not just as a set of definitions. That's what we call situated learning. All the evidence shows that people only learn deeply when they learn that way. You have got to deliver more than words. You have to deliver the world that the words go with and so what we are doing is we are building worlds.

Games and virtual worlds can allow kids to experience how the words attach to the world and to experience it, much like you try to do with a book. You want somebody to vividly imagine that book and to think through it so that anything that they are learning is attached to their own imagination and attached to experience. But the book is a set of words. We can go a little bit further now. We can put you in the book. You can play the book. You can be in the world the book is about. You can even design part of that world. You can make decisions in it and change it. If you do not like Tolstoy's ending, make another one.

It is not that this is contrary to book learning. What it really is, is a supplement to book learning and it is actually doing it in a vivid way, which books do at their best, too. It allows us to do it in a whole new way and in a very vivid way.

Virtual Worlds in Educational Institutions

The problem we have is that schools are frightened -- sometimes properly so -- but they are frightened of a lot of modern learning. We know that kids are learning through passion communities, they're joining expert communities. They're building their own stuff. They're messaging each other all the time. They're communicating, critiquing, negotiating all the time. Sometimes we like what they do and sometimes we don't but they are engaged in very powerful learning. Much of that stuff is very difficult to do in schools, as we know them now, so we often hope that sites like libraries, community centers and after-school programs can show us the way

to start a new paradigm.

So we do different things that do not smell like traditional schooling. For example, kids want to learn through teams and collaboration today. They want to collaborate and most of the learning they are doing is too complicated for one individual to do by themselves, but in school, collaborating is cheating. In this world, collaborating is learning 21st century skills and, of course, most modern work places

“Virtual worlds can allow kids to experience how words attach to the world and to experience it, much like you try to do with a book.”

want you to know how to collaborate, how to use technology to collaborate. I think that libraries, community centers and museums, most certainly as they get interactive, can be experimental sites where we discover new paradigms of how our education could work outside of our traditional grammar schooling.

The Power of Informal Learning from Digital Media

[T]oo many parents, too many policy makers do not know how truly complicated a lot of learning is today. Even if you look at very little kids, eight, nine, ten-year-old kids learning Yu-Gi-Oh!, if you don't pay any attention to it, what they [parents and policy makers] don't know is, it is replete with more complicated language than what the kid sees in school. It's very often that with websites, books, movies and television shows that are often so complicated that parents can't even understand them, the kid is writing fan fiction, or is collaborating with other kids to communicate about Yu-Gi-Oh! and learn it and get strategies.

You have this enormous, complex learning that is recruiting very complex cognitive skills and very complex language and adults ignore it or they trivialize it. So what we really have to do is to get people to see what complex things are going on out of school, because what we have today is two school systems. We have, out-of-school, kids engaged in a community and collaborative learning sometimes on social issues,

sometimes on all sorts, anything they pick to be experts on. They are doing it with other kids and with lots of technology and with tools, also where they are producing and not just consuming and they are learning 21st century skills. These skills include how to use technology, how to get new literacy, how to collaborate, how to innovate and be creative, not just follow recipes. And then we have school. School has competition today.

The policy makers, however, are not fully aware of how deep the learning is in popular culture. One example is fan fiction. Most adults are unaware of how much kids write today. They are writing more than they have ever written out of school, although they may be writing less in school than they have ever written. We are in the age of mismatch and I don't think a lot of adults know it.



Justice Sandra Day O'Connor and the Our Courts Project

The Our Courts project is trying to create a virtual world in which people come to understand the sorts of things we want to teach in civics, which is so deadly boring but which should not be boring because they are the root of how to participate in society and change it. We want to make civics not a term for learning facts but a term for learning how to participate actively in society. We want to build worlds in which kids can learn those skills but have fun and exciting experiences through conflict, through negotiation, in those worlds. One thing that I have learned is that I am a baby boomer, and an academic, and we baby boomer academics are really good at killing creativity.

This game is being designed by a lot of young game designers and at this stage I am really trying to turn them loose to get that creativity of that new generation and not impose. Even somebody like myself who has worked a lot with games, who has played a lot with games, very often we can knee jerk right back to old educational solutions where there is too much talk and text. What is exciting for me about this is having turned loose a whole group of young game designers and not putting constraints in seeing how innovative and

creative they are beyond what people like me can think. My role then has actually been to free those people up and keep baby boomers off their case long enough for us to get some very creative stuff. We're just starting, but we're already getting some very creative things going.

Justice Sandra Day O'Connor is the inspiration for the project. The project is both an interactive website that will be used in school and then a game, much of which will be in a fantasy world where you deal with sorts of issues that happen in the real world but in ways that we can make them exciting and creative. Eventually, as you learn skills, you will be doing stuff in the real world, solving real-world problems. She is the inspiration behind both things. It is something that she believes, that people no longer fully understand the importance of having a free court system and an impartial court system. She's afraid of how many people want to manipulate the court for ideological reasons.

She once said to me a very interesting thing: "You have a very different sort of power when you stand before a court than you do when you stand before the President or the legislator." Obviously, I can't even stand before the President. I really have no power in front of Congress unless I come with a whole group and a whole company, and a whole bunch of stuff. The court, however, is one place I have some power as an individual. I can stand in front of the court as an individual. I can hope to have some ability to get judgment and to get justice as an individual is a very special thing. She feels we may be losing that.

Justice O'Connor, like many people who are not millennial generation people, thinks of the word "game" as meaning something trivial, or maybe even something dangerous. We first explained to her that often the word "game" means "world." It means an imaginative world in which you get to try out things and explore, and inquire. Then she went to the Games for Change Conference and she saw how many serious endeavors, that are not shooting people, are involved and I think that really changed her. At that conference,

“ We first explained to Justice O'Connor that often the word “game” means “world”. ”

somebody said to her, “Well, I hear you don’t like the word ‘game?’” And she said, “No, that’s what they use and I’m fine with it.” I think what she understands, which so many other leading people have not understood, is this is a term of art that is much deeper, and means many more things than shooting people.

In and Out of the School Setting

We are addressing both communities because there are limits to what you can do in modern schools. You know we want to break the grammar of schooling. We want kids working collaboratively. We want them negotiating. We want them producing. We want them critiquing. We want them teaching and mentoring each other and not simply being taught by adults. Some of that stuff is hard to do just in schools, so we want to go at it both ways. We want to have a wedge in there with the website, curriculum ability for teachers that can be used in a classroom if there’s only one computer -- sadly, but there’re too many of them. It would create an interest where the kids who have the opportunity can then take that interest they got in class and go into this game world and really become part of a passion community with other kids. They get a real passion for civic change, for participation and for empowerment.

Say they are in a fantasy world where they’re dealing with an issue that’s like one in the real world. Let’s say conflicts between Native Americans and environmental rights and civil rights. We know there are conflicts; there are court cases that have brought up these issues. If I just throw out a bunch of historical stuff to kids, they’re going to be bored; but if I put them in a world where they see the issues in a really engaging context, then later they’re going to earn the right to learn more about it. Then we’re going to show them these things happen in a sort of form in the real world and they’re still happening.

If they get a passion to say, “Well, that’s just really unfair with what happened to that Native American group in the mining case, and I think the decision was ridiculous. It’s not how I made it happen in the game world.” We will show them real world sites where they can go get involved and participate in that fight if they want to do it. We’re trying to get a fire in them to create a passion. Different kids will have passion for different things. One of the troubles with the schools is that everybody has to be interested in the same things. We’re going to hope that some issue will turn you on

if we show you a lot of issues that are very diverse. If none of them turn you on, you’re probably brain dead.

The Joan Ganz Cooney Center Report

The report for the Joan Ganz Cooney Center is about how we have two crises on our hands in education now. One is the old reading crisis that poor kids learn to read less well than many rich kids; and we have an emerging digital crisis, not just an access to digital equipment, but in the fact that some kids get access not only to the equipment, but very rich learning systems and mentoring systems and other kids don’t. The kids who have access to the rich mentoring and learning systems around computers and other technology are using that to get 21st century skills.

The report is about not speaking to these two crises separately: let’s do them together. There is no reason why we cannot increase kids’ traditional literacy skills while we are also putting them into digital learning situations where they are getting 21st century tech skills. We just don’t have the resource to do these separately. The real root of the literacy crisis is not just that the kids don’t learn to decode, it’s that they learn to decode most of them, but by about fourth or fifth grade, they can’t really handle the complex, complicated language, or the content areas in algebra and in science, and social studies. They have only been dealing with everyday vernacular language. They haven’t been dealing with complex language of so-called “academic” language.

Even though they can read, they can’t read to learn. Well you know, that’s where situated learning comes in and we can build digital worlds that show them what that complicated language means by putting them into a world where they are seeing how it applies to actions, applies to dialogue; [they] then can negotiate with it, they can hear it in argumentation. So we can situate it in digital learning where they are getting 21st century text but they are getting up to speed in literacy [through] content. ☺

"We're hugely about narrative storylines" - Quest Atlantis and Learning through Gaming



Sasha Barab, a professor at Indiana University in the Learning Sciences department, talks about their Quest Atlantis project, narrative virtual worlds, and its potential to transform learning.

Podcasted on May 5, 2008.

<http://tinyurl.com/RezEd-org-2>

This History of Quest Atlantis

The Learning Sciences department at Indiana University is a program that looks at how people learn. It tries to design applications to help us further our understanding of what it means to think about how people learn and how we can improve that in the schools.

Quest Atlantis is an international learning and teaching project that basically tries to develop game design methodologies and technologies to get kids in schools thinking more deeply about academic content, thinking more deeply about issues in the world, and thinking more deeply about themselves and why both of these matters to them.

Quest Atlantis currently has about fifteen thousand members and we have, just this year, started to scale. When we initially started, it was funded by the National Science Foundation, and it really was kind of a question: Can we take a 3D multi-user virtual environment and design it in a way that would engage kids so that when they leave school they will play with it, but will also be comfortable for teachers working in the content text of K-12 classrooms, [all of this] initially primarily in the US?

Now it's expanded. A couple of years ago MacArthur got in and said they wanted to think more deeply about the "game-iness" of it and what it would mean to take this

project international. We started scaling in about the last five months. Our goal is to make a game-based learning environment available to schools worldwide.

The Quest Atlantis Experience

I have to give you a richer feel of what Quest Atlantis is like from the inside. Basically, what happens is teachers will be trained through a one-day workshop or they might do it online and then register their students. The students then can log into a 3D virtual world.

If the teachers' focus is on science, they might log into a virtual park and the students will start running around with their avatar, clicking on non-player characters and getting text. They may be saying, "We have been waiting for someone who's a really committed environmental scientist, who can help us figure out the problem and why." Students go around the park; they go up toward where loggers are; they go up to where the farmers are, and they start interviewing different kinds of people. In doing so they eventually start to collect data -- initially as opinions. The loggers might be saying, "You know it's those farmers. They've been using all these fertilizers. They don't have proper run off, it goes into the water and if you collect data about the water quality there, you'll see the phosphates and matrixes are too high." Well, when you run over to the farmers, they are like, "Well it's those loggers. They are logging too close to the water. They have erosion problems. If you go look at the turbidity levels, they are too high."

Basically, over the next six or seven class periods kids will run around the 3D environment interviewing people and collecting data which, over time, they learn how to analyze. They can start to make scientific claims about the water quality levels at different parts. Well, if at the end of it they say, "Well, you know, the problem is the loggers. Let's kick them out," the next time they log in, the park is bankrupt because the most productive financial component of the park has been removed. They start to think about science not just in terms of the technical aspects of science and the disciplinary context of schools, but they start to think about science in real life narratives and what are the implications of making scientific decisions without thinking about the broader socio-scientific issues.

They will think not only about water quality, turbidity, nitrates, and phosphates; they understand the ethical issues

Quest Atlantis

about logging companies and the need for wood in our homes. Maybe we need to think about switching over to siding or maybe we need to think not just about removing loggers and simplistic notions of good versus bad, but think about what are the different types of regulations. As we learn about the particular logging company in this space, we start to learn they are doing a lot of things to help protect the environment.

A large part of the outcomes that we think about are why is science useful and do kids start to see themselves as scientists because they're playing one in this game? In Quest Atlantis they are actually the first-person protagonist deter-

mining the outcomes of the story they are engaged in. For a lot of kids, this sense of consequentiality is very different from what they normally get in schools.

Empowering Students

Part of the challenge is then to bring up issues that make them think differently about who they are and what they can do in the world. I just gave you an example of a science issue. Another example, through support from the MacArthur Foundation, is through our just-finished version of Mary Shelley's Frankenstein. In this you have to go to the graveyard because Dr. Frankenstein has asked you to, and you have to decide: do I get this bag for him and bring it back, do I lie to the Constable and say, "Oh no. I'm just walking around the graveyard," because I know that the goods that I'm stealing potentially will save the entire town if he can



Above, screenshot from Quest Atlantis.

keep experimenting. There are all kinds of ethical dilemmas around lying, around bio-ethics, about creating life. There is also persuasive writing they have to do in here to convince other stakeholders who sometimes are their teacher, or their classmates, or sometimes the game itself.

“ They start to think about science not just in terms of the technical aspects of science but they start to think about science in real life narratives. ”

I think, when we talk about outcomes of schools in the U.S., we've gotten very narrow. We don't think about what the usefulness of persuasive writing [is] and what are the reasons they would do that; so we kind of put the cart before the horse in a sense that we've taken the outcomes, or the tools, but we haven't given the kids the reason to think about why are these tools useful, why understanding turbidity matter to me as a kid? We haven't done a good job of positioning story lines in which the kids have agency. And so I think what games bring us is a really powerful means for creating these fictional worlds that can have real world implications and get kids to think not only deeply about the use value of the content of schools but also other problematic issues in their world. A kid might not be interested in reading the newspaper but would be interested in playing a game about Uganda for example.

Challenges Moving Forward

Some of the challenges are: first of all, in the US in particular but as I go around the world (we have teachers in Singapore, Australia, and Canada), some of the big challenges are standards. Schools are increasingly being held to these abstracted bits of knowledge. Why is it useful for teachers to take time investing kids in these larger storylines when many people still believe the best thing you can do is tell people what they need to know and then test them on it.

One challenge educators have is communicating to parents, principles and administrators that simply telling kids a definition is not the same as knowing something. A lot of kids opt out of participation in schooling. We're starting to

see a lot of parents being a little disgruntled with the types of content they are getting, but I think helping teachers to engage that dialog and to think differently about what are the goals of schooling, is one challenge.

Another challenge is, if I'm a fifth grade teacher, to take a textbook out and to lecture someone on the definitions in that textbook; maybe bring in an example here and there. It's quite another thing to invest kids in a very complex world that goes over ten class periods and, at certain points, Johnny is needing to understand turbidity and, at a totally different point, Lori is trying to understand a concept of mutafication because she read some field notes she found in the 3D world. Part of the real challenge for teachers is how do I manage thirty five kids moving at different points in the game, or even more importantly, the bell rings and we are all confused? Getting teachers to be comfortable with kids in multiple spaces, that they are not just telling them about a definition but actually getting the kids to think deeply, those kinds of questions are essential as to what schools are normally doing.

The mindset of using content rather than memorizing it, and thinking about kids as change agents, rather than objects to be changed, is really challenging, and especially in the context of standardized testing. Teachers are put in such a difficult situation right now in our world, where they are being held accountable for thirty kids at the end of the school day all knowing a particular content at a high stakes level, in some abstract way, that is potentially meaningless to a kid. Whether I know turbidity or whether I know distance, some sort of mathematical algorithm, is no different. They are things to be tested on later, where knowing turbidity, mathematics or knowing English, are very different; they are not just things I can exchange for a grade. They are things that allow me to operate in the world in different ways. We need to help teachers help kids to think about academic content as tools that will help them bring about games they care about, change things, engage in storylines that they care about. Right now the distance between the school content and a kid's world is very large.

“ The distance between the school content and a kid's world is very large. ”

Looking to the Future - Putting the Player in Charge

There are many different futures, where many games and game design engines are more about “if-then” rules and complex interactive rule sets; we’re hugely about narrative storylines. Part of what we are doing right now is we are the designers of those stories and kids are first person protagonists engaging the stories. Our goal in the future is to help kids become designers of stories and tell stories about their own world: to help them think about why mathematics matters, to create a game that shows its utility for another child, or think about the concept of Apartheid. Have them develop their version of Apartheid. Right now we all think it’s pretty cool when you get an interactive card for Valentine’s Day, but wouldn’t it be cool if I developed a forty-five minute game that allowed your partner to kind of go into detail about your feelings for her or him. We can get more sophisticated in communicating the experience. Game engines do that. So what we are trying to do is figure out how to put those tools in the hands of kids worldwide so they can tell their own stories. Not tell them definitions but really have them share their experiences that they want users to engage. This is a big future plan.

Wikipedia is really powerful, a wonderful kind of post-modern move to take definitions away from one company and put them into multiple voices who share their different perspectives on it. But it still comes down to definitions on Wikipedia. We would like to offer a kind of 3D dictionary, where if I want to put in my definition of a particular person, Gandhi, I can develop an hour-long game and that’s my experiential version of Gandhi. I want to therefore understand who Gandhi is. I don’t just read a definition, but I actually engage in the experience. I think both forms have value, but in society, we’ve gotten so into removing, into abstracting away from experience, that I think we are doing a disservice to what it means to participate in the world by having all these definitions everywhere -- all these shorthands that are more efficient but not necessarily more meaningful. Our hope is to have current events that would be like games that get released very quickly, about half an hour-long games that help you understand what is going on in Uganda.

The future of kids as designers is a big part of our future plans, as opposed to just consumers of our produced games. 

“Interesting Patterns” - Research On British Youth Use of Virtual Worlds



Jackie Marsh, Professor of Education at the University of Sheffield, talks about research she has done with British children around virtual worlds, such as Club Penguin, Habbo Hotel and Barbie Girls.

Podcasted on December 1, 2008.

<http://tinyurl.com/RezEd-org-21>

Researching How Teens Use Virtual Worlds

I undertake research that looks at the role of popular culture, youth technology and media for young children and safe practices, both outside of school and within the curriculum.

Most recently, we undertook a study in primary school with children aged from five to eleven in England. We were interested in their out of school use of virtual worlds. Children were asked to complete an online survey in which we asked some questions about their access to the Internet, how often they use the Internet, which virtual worlds, if any, they used, and what they did when they used the virtual worlds. A total of 175 children across all the groups completed that survey. Then we interviewed children. They took part in the series group interviews and individual entries. Finally I observed three children in the home over the period of a month. I made four visits to each of the children over the year in which I filmed their use of the virtual worlds, in this case Club Penguins.

“Many of the children were saying that they found reading inside these worlds more exciting then reading outside of the worlds.”

Initial Results

We were very interested that, in total, 52 percent of the children surveyed said they used virtual worlds on a regular basis. That was higher than I had expected. The virtual worlds they predominantly used were Club Penguin, Barbie Girls and some of the older children were beginning to use Habbo Hotel, which is aimed to serve a slightly older demographic -- young teens and children in mid-teens. We found children age nine and ten using Habbo Hotel. Mainly [younger] children used Club Penguin and Barbie Girls.

There were no boys who would admit using Barbie Girls in the survey. Younger girls almost exclusively used Barbie Girls; as they moved into the older age ranges they began to use worlds such as Club Penguin.

I was looking at their reading and writing practices in-world, because our adults are quite anxious that children are spending a lot of time online and that this might be taking them

digital beginnings

Young childrens' use of popular culture, media and new technologies

away from more traditional practices, which are reading and writing. I found out that this in fact obviously wasn't the case, that there were a lot of reading and writing activities inside these worlds, as well as outside of the worlds related to them. In Club Penguin for example, children were regularly reading newspapers. There is a Penguin Times that gives them tips and cheats and so on and stories about some of the characters in the world. The children regularly read this. They also read some of the books in the virtual library that is in-world. They read a lot of messages.

That also was true with Barbie Girls, although less so. There was less of an emphasis on reading texts within Barbie Girls and more of an emphasis on shopping for handbags and shoes. So, [there are] very gendered practices inside of Barbie Girls, but also a range of reading and writing outside



Above, screenshot from Barbie Girls.

the worlds that related to it. For example, children were accessing fan sites related to these worlds and on these sites there are a whole range of textual practices, such as blogging, chatting, and so on. One of the arguments that I make is rather than seeing these worlds as in competition with text we should see these as one of the sources. In fact many of the children were saying that they found reading inside these worlds more exciting than reading outside of the worlds, sort of “real” world reading if you will, because it keyed into their popular culture interests and their gaming interests.

What Youth Do

There were a lot of interesting patterns, particularly in relation to play, actually, [and] the way in which play and literacy were integrated in-world. I categorized the types of play I observed in-world and many types of play one would find in the offline world. For example, there was a lot of fantasy play narratively driven, especially in Club Penguin, and because the makers of Club Penguin do introduce particularly narrative storylines now and again. So [there is] lots of fantasy play where children take on characters. A lot of what you would call socio-dramatic role play, in which children re-play scenarios that relate to their real world and experiences such as parties, shopping, playing house, et cetera.

“ 52 percent of the children surveyed said they used virtual worlds on a regular basis. ”

There was evidence of game play -- play with rules -- both in terms of games that were constricted by the producers themselves, where the children play games in order to earn coins within the world so that they can purchase commodities, but also rule-bound games children invented themselves or interestingly transferred from offline environments: games such as chasing, tag and hide and seek that they imported in a sense in to the online environment. I also saw what you might call rough and tumble play, which is normally used to describe physical play, such as play fighting, wrestling, chasing and so on. I adopted that term to describe online play that involved deliberate attempt by children to engage in avatar-to-avatar contact, such as chasing, coor-

inating movements of the avatar that's about to achieve a certain end.

For example, one of the activities I saw from the children is ice picking in Club Penguin. All the avatars were standing on one side of it and jumping up and down with other avatars. That was a really interesting phenomenon for me, the fact that there were lots of in world social rituals through play that develop these communities of practice. Some children were making machinima, or collages, of these films inside the world of these social rituals and posting these on YouTube, and then other children accessing these and revisiting their part in it through the comments. There's a lot of interesting activity there.

Opportunities for Educators

There are a great deal of opportunities for educators. In terms of the worlds already constructed, I can see there could potentially be a problem. The school I was working in wanted to do some work with children around their interests in Club Penguin, but unfortunately we couldn't access it because of the firewalls. I think if schools are going to engage properly in a lot of Web 2.0 work, then there needs to be some work done on access and trusting in schools to manage that access. I think that there is a great chapter you can do with the worlds already in construction. For example within Club Penguin there's a whole range of science work that you can engage in around icebergs and penguins life cycles, a whole range of reading and writing activities, such as writing about your penguin's adventures, and diaries and that kind of thing.


I think there's a great potential in worlds that allow children to build and create themselves. At the moment, these manufactured worlds have very little opportunity for you to generate content for young children. It's very much driven by the producers, and I think we need something like Second Life but appropriate for five to eleven years old, so that children can build and construct themselves. Once you [have] something like that then the opportunities are endless. My colleague that I mentioned at Sheffield University has actually been working with schools in the North of England using an Activeworlds site in which they built a replica of their town. Children in primary schools across that local authority engage in lots of reading and writing activities together. There is lots of very exciting potential, I think, around these virtual worlds.

Areas of Concern

I would hope this study and the study of a number of colleagues who are working in this area would illustrate to teachers that there's no need to be anxious around the use of virtual worlds in schools. Obviously there are issues involved that we have to consider and be aware of and not just gloss over some of the problems. I have seen evidence in the children, reported evidence of peer-to-peer bullying in virtual worlds, but then I'd say, "Well, we get peer-to-peer bullying in the offline world also." We shouldn't be melodramatic around the way in which we should change ourselves online. We need to address it in the sort of ways we do offline for peer-to-peer bullying.

There are other issues, such as the children being targeted by commercial companies. For example, in Barbie Girls the children sit in a cinema and then their virtual avatar watches a video that links to the real world version of a Mattel produced-video that children can go buy.

of these worlds in children's lives. I think there are a lot of opportunities for these worlds. Probably the producers of these worlds will begin to see the educational opportunities and might begin to manufacture worlds that teachers can use easily, so that children and teachers can construct their own environments themselves. I see that kind of development coming pretty soon, actually.

As long as that's done in conjunction with teachers and children that can lead to development, I think it's in a sense unstoppable. Didn't someone say that it's within four or five years that about 80 percent of us are going to have some kind of online presence in a virtual world? That kind of out of school activity can only seep into curriculum pedagogy and I think we have to be prepared for it, so teachers can, with confidence, embrace some of these opportunities. 

“The producers of these worlds might begin to manufacture worlds that teachers can use easily, so that children and teachers can construct their own environments themselves.”

I wouldn't like to dismiss some of those concerns that teachers have; I think they are real and that there are ways we can develop critical literacy practices to help children engage with those. What I would say however, is look beyond those to the potential that these worlds can offer curriculum pedagogy, as well as in terms of motivation and engagement and its excitement. This is a world of children outside of school, meaning schools can capture some of that magic for children within the curriculum and build on that kind of skill, all to the good.

Towards the Future

I do see these worlds becoming more important in the future. Through a range of professional development opportunities and through children bringing these things into schools themselves, teachers will become more cognizant

On Researching Teens, Video Games and Civics



Amanda Lenhart, a Senior Research Specialist at Pew Internet located in Washington D.C., talks about the key findings from the Pew Internet in America Life Project's survey Teens, Video Games and Civics and its relevance for virtual worlds, learning and future research opportunities (released Sept. 2009.)

Podcasted on October 6, 2008.

<http://tinyurl.com/RezEd-org-17>

The Origin

The Pew Internet Project wanted to do a study of teens and video gaming and we knew the MacArthur Foundation had a big initiative that was looking at digital media, learning, and youth. We were connected with the MacArthur Foundation through a meeting, where I was called in to be an advisor, and in that meeting, I was connected with my research partners at Mills College. And so three parties got together and created this research project where we looked at video games, but [...] we also wanted to focus on a particular question around games. And so we decided to focus on games and community, games and civics, and games and socialability.



Top Line Results

I think one of the things that really astonished us was this sort of benchmark that we found: that 97% of American teenagers between the ages of twelve and seventeen play some kind of games. That can be anything from playing a

game on your cellular mobile phone to playing a first person shooter on a console to playing civilization on your home computer. Games are really universal for American teens.

Beyond that we found game playing is very diverse. It's not just that teens are playing one kind of game; individual people play a wide variety of games. Your average teenager is playing five or more different game genres; forty percent of teens are playing eight or more genres.

“Games are really universal for American teens.”

We found that games are very social. They are not just something that you play by yourself, though certainly teens do play alone. The majority of teens, most of the time, are playing games with other people, with friends. That could be friends online, but could also be friends who are sitting next to you in the same room. [Games are] a space where teens engage and interact with each other.

Diversity of the Survey

We did find that girls are slightly less likely to play video games than boys. But when we say slightly less likely, we mean that it's 94% of girls as opposed 99% of boys. So it's still nearly universal for girls just as it is for boys. Girls are actually likely to play slightly less frequently than boys.

And the kinds of games they play tend to be a little different, though half of girls are playing action adventure video games. It's not necessarily the stereotype that girls are only playing puzzle games and the boys are playing the first person shooters; certainly girls are playing all those games as well. In terms of overall game play there wasn't a lot of variation at all. It's really every child who was playing these games. There weren't any differences by race or ethnicity, or by family income, or by your location in the country, whether you live in a city or in a town, or in a rural area. Pretty much every kid is playing games.

Linking Civic Issues and Gaming

There are certainly a lot of civic questions that I think have sprung out of these two concerns. One of the questions

when we went into this research was: are games causing or leading to greater amounts of isolation? Are teens not spending time with friends? Not spending time in their community? Not engaged with their community? Or, conversely, do games actually have some promise for connecting adolescents with their community and helping them to become better citizens. To be more civically engaged, politically engaged?

“ We found that teenagers who play with other people in person are more likely to be engaged in their communities... ”

We asked a variety of questions to try and look at [...] community and civic engagement; some were really basic questions about trying to relate how you play games and some of your offline behaviors. What we found is that teens who play games with others in person are more likely to actually do things that might be called civically engaged. And so we took behaviors of people who have been spending thirty years researching civic engagement [that] have established some behaviors [as] markers of being civically engaged, things like talking with somebody about a candidate you might vote for; volunteering in your community; helping to raise money for a charity; helping to organize people around an issue; following and staying engaged with political and community news. We found that teenagers who play with other people in person are more likely to be engaged in their communities in that way.

Then we tried to push it a little bit further by looking to see if there actually [were] ways you could play a game that might then also connect back to your engagement with your community. So we looked at behaviors that you could engage in within a specific game. In this sense, we asked about whether you played games where you had the opportunity to help somebody else; whether you played games where you had the opportunity to organize people into groups or guilds [like in World of Warcraft]; whether or not you had the opportunity to pretend or to practice being a leader of something rather than be a city or a town, or a country; whether you had a simulation of a government experience.

We looked at these behaviors and found that teens who said

that they engaged in these kind of behaviors within the kind of games they are playing, often were more likely to say that they were engaged in their community through all those other behaviors I just mentioned about voting, about volunteering and raising money for charity and talking about being engaged with politics. Our research isn't causal. We can't say for certain that one of these things causes the other things. But we do actually think there is something of a two-way relationship here. That certainly kids who are [...] engaged in their community are a little bit more likely to play games where they have the opportunity to engage in those kind of behaviors, those we call civic gaming behaviors. But we also believe that when you play a game that has these civic opportunities within them, you are then more likely to become more engaged in your community.

Linking Ethic Issues and Gaming

There were a couple of elements [that] I think potentially relate to ethics. We asked teens about whether or not they had ever experienced other people engaging in what might be called “anti-social behaviors”. We asked teens whether or not they had seen someone in a game be overly aggressive to another person in a game. We [...] found about three quarters of teens had had that experience. We also asked teens whether or not they had seen somebody being or using language that was hateful, racist or sexist within a game. And we found that about half of teens had said they had experienced that.

Then we followed up those questions and asked whether or not the teen had seen somebody else within the game responding to antisocial behaviors and about 70% of teens in each case said they had seen somebody responding to those behaviors. We don't necessarily know whether or not the response was positive or negative [...].

“ Games are in some ways a real microcosm of life. ”

We also followed up with another question that asked whether or not teens had seen positive behaviors in a game: Had you ever seen anybody being generous or helpful within a game space? And 70% of kids said they had experienced that as well. Games are in some ways a real microcosm of

life; of the world. [Y]ou would experience positive behaviors in your school hallway, at the mall or on the street in your community in the same way you would now have the experience in the game space as well.

Gaming and Virtual Worlds in Education

I think they do show some promise for education. Certainly in our survey, we asked about virtual worlds and we found about 10% of teens say they had visited a virtual world. We found that younger teens are actually more likely to have visited virtual worlds than older teens. So there seems to at least be a basic level of interest in these spaces, though that is clearly something that needs to grow and to be talked about more. More kids would need to be introduced to these spaces. I think potentially a school-based introduction to that has a lot of promise.

We also asked about whether or not kids had played games within a school setting and a little more than 30% had had that experience. So we are starting to see video games and virtual spaces being used by educators. But it's clearly at the beginning of its use. I think we do see that games show some promise for engaging kids with ideas, at least in the civic realm where we asked about them, that may in fact have relationships to their off-line behaviors and to their experiences as being part of their community.


It strikes me that there is a good deal of promise for games as tools for learning, games as ways of engaging kids with learning. One of the take-aways for us was how engaged young people are with games. Half of teens are playing games on any given day. They love them. They play them all the time. They are engaged by them and excited by them and it strikes me that educators [could see that] there's so much promise. Particularly with virtual worlds that are so malleable. To harvest that excitement that teens have around video games and around virtual spaces and to use that as a way of sort of pulling that excitement into the realm of learning.

“It strikes me that there is a good deal of promise for games as tools for learning, games as ways of engaging kids with learning.”

Future Prospects

This is just the first, hopefully, of many reports on this topic and not necessarily just by us. I think there's a vast space left to explore, particularly virtual worlds. As I said, only about 10% of young people we talked to said that they were using virtual worlds and about 20% of teens have used massive multi-player online games. If you think of MMO's as kind of a gateway towards a more traditional virtual world, I think certainly there seem to be kids who are primed to use these virtual spaces. I think the potential for growth in virtual spaces seems quite large, as the people who use it more often are younger teens.

In terms of ideas for research: I think understanding how virtual worlds specifically can transmit information and can be used through learning as creative spaces. That was one thing that we didn't have a chance to spend a lot of time with: games as creative spaces, talking about bonding, and using games as a way of expressing yourself creatively. I think there's a really ripe opportunity for doing research on that in virtual spaces as well, not just in games. But again, also understanding virtual worlds and how they are different from games, understanding them as social spaces and understanding them in how they connect with society and community.

I think it's all open for research. We really don't have a lot in our survey about them, so it's wide open. 

"The New Playground" - Trends in Virtual Worlds and Education



Nic Mitham, founder of KZero Virtual Worlds Consultancy, offers his perspective on the history of, and major trends in, youth-oriented virtual worlds like Whyville, Club Penguin, Second Life, Barbie Girls, Lego Universe and more.

Podcasted on January 12, 2009.

<http://tinyurl.com/RezEd-org-24>

Background on KZero

My name is Nic Mitham. I'm the CEO and Founder of KZero Virtual Worlds Consultancy, based in the UK. KZero was actually founded in 2006, so quite a long time ago in virtual world terms. We started out really just looking at the space. Back in 2006, the virtual world sector was ignited by Second Life. Off the back of that, we had lots of brands entering virtual worlds, trying to do marketing campaigns. The niche that KZero carved out was looking at metrics, numbers and analytics relating to virtual worlds. Ever since mid-2007, all of our business has been consulting, either of virtual worlds themselves or for companies looking into moving into virtual worlds.



Kids' Worlds - In the Beginning

We work closely with virtual worlds to either bring them to market, or to better position themselves in the market because, as you know, it's an extremely high growth sector with dozens and dozens and dozens of virtual worlds either live or being developed.

The main one, and this is probably of no surprise to anyone listening to the podcast, is the explosion in kid's worlds.

Second Life led the way. That kind of opened people's eyes to what we refer to as the new playground, a place where kids spend time online. We had early companies, such as Habbo Hotel and Gaia already in the space, but the biggest thing I would say happening in the last twelve months is the sheer volume of companies trying to create virtual worlds in the kid's space. It is important to point out here that the vast majority of these kids' worlds are all casual gaming based, which presents an upside to other nuances and niches in the sector, education being a prime example of that.

Some people may disagree with what I'm about to say, but I think what's almost to blame, if you like, for the explosion of kids' worlds, was probably the Disney acquisition of Club Penguin. It was widely reported and I think that kind of opened people's eyes to the upside available. With a caveat, I would say that it is highly unlikely that we'll see acquisitions of that magnitude occurring in regular doses or in regular amounts or volume in the near future. But really, that Disney acquisition was what I think prompted all the venture capitalist funding and angel funding into these new worlds, particularly as you're saying correctly, around the age of ten.

The State of Educational Uses of Virtual Worlds

On the educational side there has been some earlier attempts. Whyville is probably a good example of an education-based world and the Second Life Teen grid, where there has been a lot of work. But across the board, in terms of educational worlds for younger people, it is massively underserved. At the same time, we are predicting it to be a big growth area in 2009. I think this year we will see some better attempts of worlds being created which focus on learning, education, training and personal development. We're quite bullish on this little sub-sector; it is underserved and we think it's ripe for growth.

There are probably two things which will open people's eyes in the educational sector. In essence, collaboration and creativity: the ability to put two people in the same space and allow them to, in some cases, collaboratively create, while on the other side looking at remote learning, where two people, regardless of their geographical location, are able to basically come together in the same space.


Major Trends in Virtual Worlds for 2009

One area where we think there is going to be some very strong growth in 2009 is what we refer to as real brands creating virtual spaces. When you look at the bulk of the worlds currently out there, and those in development, they are what we call pure plays, which are brand new companies creating brands from scratch. Then drill down and actually see some of the worlds which have had strong success. A good example is Barbie Girls, with well over ten million registered accounts. We are pretty confident in believing one of the main reasons for their success is because they are a real world brand and have a real world brand's awareness and recognition.

Flipping that forward, a big growth area in 2009 will be real world brands, which could be media properties, toy brands, basically, recognized existing companies in the real world, creating their own spaces. A good example of a world not yet launched but coming up soon, would be Lego Universe. Lego is an age-old brand, but then using virtual worlds to their advantage. We see that as being a big growth area.

Education, we think, is going to be very popular. Moving into a slightly older demographic, we think mirror worlds are going to be popular in 2009 and probably a good conduit to actually get people involved in virtual worlds who maybe haven't hooked on to them to date; a real world place recreated virtually can bring back a sense of context.

“We're quite bullish on this little sub-sector; it's underserved and we think it's ripe for growth.”

Take the subject of history at school. What virtual worlds are great at is recreating places. You could even go as far as recreating the pyramids or recreating ancient cities, towns and locations, or recreating those places based around certain events; or using virtual worlds to effectively travel back in time and put students and pupils in 3D environments, to refer back to places which are obviously no longer available today. 



In [Virtual Worlds, Learning Across the Metaverse](#), RezEd takes a look at how practitioners and students utilizing virtual worlds are working to define and develop a new range of standards for education through participative teaching and immersive learning. We will hear from experts across virtual worlds including Whyville, There.com, Dizzywood and Panwapa. In doing so, we will gain insight into the unique affordances of virtual worlds as instructional tools as well as the ways in which different kinds of learners respond to them.

Virtual Worlds: Learning Across the Metaverse

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Whyville.net as a Learning Space



Debra Fields, a doctoral student at the University of California, discusses Whyville.net as a space for learning. Whyville was created by a company called Numedeon, based in Pasadena, California. You can learn more about Debra's research on her

blog, Everything Whyville (<http://kafai-whyville.blogspot.com>).

Podcasted on November 17, 2008.

<http://tinyurl.com/RezEd-org-20>

Background

I've been involved in informal learning organizations for over a decade. It's what I worked on in college. I became interested in gaming when I was at the University of Wisconsin-Madison working with Jim Gee, among others. At UCLA, I had the opportunity to work in a virtual world called Whyville.net. So, I've been studying that for the past couple of years, as well as how kids interact across Whyville, with each other, and some of the other ways in which they learn in that environment.

Whyville

Whyville is a place where kids ages eight to sixteen visit online. Whyville has roughly, right now, over three million kids registered, with about twenty thousand kids going on it a day. Since 1999 when they started, they have been basing themselves on making it a ScienceEd sort of site. Now ScienceEd isn't everything that kids do on Whyville; kids come on to hang out. They design "face parts" and sell them, so you can have your own business online.

To create how you look, since it's a digital environment, you add layers on a two dimensional face. So you make an oval for your head and you layer on eyes, eyebrows, hair, mustaches or, if



you want, skateboards, dogs, et cetera -- anything that you can imagine. I change my outfit quite often on Whyville. I've had a lot of different looks. I've been a pixie. I've had ponytails. I've dressed up for St. Patrick's Day. Those sorts of things.

You can definitely represent your interest. It's a great way to connect and make friends. Some kids will animate characters so that they can make friends with people with similar interest, or have a horse next to their avatar, which is what your digital character is called.

Educational Aspects

The bottom layer has educational aspects in Whyville. The way you earn clams in Whyville, which is the virtual currency, is you play various science games. They have a lot of pretty interesting science games. After that, there are actually a lot more progressive opportunities in Whyville to be involved in science. There are the games you play for salary points, so every time you log into Whyville you get a salary. But then there're also more community-based kind of games. Right now, I go on Whyville and I eat breakfast, lunch, dinner and a snack every day. If I don't have enough calcium in my diet then I get a bandage around my head or if I go on Whyville and forget to eat then I'm very pale the next day. It's actually a pretty fun nutrition activity. One of the kids that I work with tried to make a vegan diet on Whyville but there are constraints. She had to make sure she had enough protein, iron, fiber, etc. That was a big challenge for her. So there are those sorts of opportunities.

They have various environmental issues on Whyville as well. A red tide has infested the beaches on Whyville, creating a situation where you have an overflow of nutrients. It's a common problem in the United States and around the World, where there's run off that pollutes the water and causes plankton to bloom. The kids have to analyze the plankton, figure out what they are eating, where the highest concentration of them are, and plant seedlings on the beach nearby to counteract them. Instead of getting rewarded with money for playing science games they're actually investing money to save the environment in Whyville, while learning about the environment in the process.

There also are several viruses on Whyville that go around that create various symptoms like pimples, sneezing, coughing. Right now you can go on Whyville and design a virus so as to understand how viruses spread. You can also design vaccines

and purchase them. So I sell a couple of vaccines on Whyville and make a little bit of money off of that, though I'm still behind on my Whyville car payments.

Researching Education in Virtual Worlds

Some of the primary ways that I have studied Whyville is through a couple of after-school clubs. I studied one of them just a couple of months ago with some fourth through sixth grade elementary school students. Part of what I've done with my work with Yasmin Kafai at UCLA is study how kids learn to be a part of Whyville. It's learning to be a part of another culture: how they learn and interact with other kids, what information they share with each other, how they navigate places in an after-school club where they are physically with other kids and in Whyville, where they're virtually with some of the same kids, also a lot more kids.

After the kids were on Whyville for about four weeks, we had a costume contest in which we said, "Change your avatar. We are going to vote on who has the best new look, something very different from what you are now". One girl moved from being a really cute girl with lovely flowing brown hair to an alien monster with gashing teeth and a beautiful brown brimmed hat. One of the boys switched to being a girl and another boy became an anime character from one of his favorite manga series. I went Goth, which kind of freaked out the kids. It was pretty funny. And at the end of that we talked about how it affected your being on Whyville. How did people change their interaction with you based on how you looked? It was a great opportunity to kind of think about how you look, how people act towards you, about people's perceptions and first impressions. It was a great learning experience.

“It's kind of learning to be a part of another culture.”

Learning Spaces within Whyville

I think there are a lot of opportunities to create learning spaces in Whyville. Whyville has so much going on in it and it is changing all the time. They keep getting new educational partners, both for-profit and non-profit. For example, Toyota has cars in it and I have two cars. One I have paid off and

the other I'm behind on my loan payments because they're very expensive. It has a wing and a cloud underneath it. It's very cool looking. You can learn about finances. You can take out CDs from a savings bank and do some common banking things. I think the financial side is one of the most easily learned parts of Whyville because it is so built into the daily experiences and I think the kids like that. It's very empowering for them to be able to manage their own finances in a certain way.

Whyville has partnered with NOAA to do some research on heat vents and animal species in the ocean. In some ways, if you are able to get a partnership with Numedea, which would require quite a bit of money, you could certainly build an area in Whyville. Some not-for-profit [groups] have done that. There's a girls games group, working to build miniature games on Whyville. Right now you can just browse games that this girls' club in Northern California is making. One thing that we've done in the classroom is build a unit on viruses and then have the kids experience "whypox."

“Students would find out things about Whyville much more quickly than we would...”

Whyville vs. Other Virtual Worlds

Whyville reaches an interesting age group, eight to sixteen, with the average age being twelve. In terms of virtual spaces that are reasonably safe for kids that also have some sort of educational element or goal behind it – it's kind of rare. There's actually a lot of richness in Whyville. You're not just going around playing asteroid games or only doing money. You have some design opportunities in there because you can design your own face parts and try to market them. You can make airplane contracts. It's a vast world. It has a lot of in-roads, for a lot of kids with different kinds of interests, and I think it has some staying power. If they really get into it they can write for the newspaper.


In terms of the other virtual worlds out there, I think it's very easy to get into. I think worlds like Club Penguin grow kind of boring for kids when they get to older elementary school and so this is a good place for them to be. Then you have

Teen Second Life, which is only for teenagers, which I think is very difficult to get into unless you have some extra support to help you learn how to program and take advantage of some of the openness in that environment. Whyville is kind of in the “tween” age group right before teenage-hood.

Whyville in an Afterschool Program

In terms of setting up the after-school club, the school already had an after-school program for kids to stay after school for a couple of hours, and so we recruited from them and just said, “Anyone who wants to join our technology club, go get parent permission.” I ran it and then later I got a couple of other students at UCLA to help me run it. We just had the kids play on Whyville and helped them answer questions. They would find out things about Whyville much more quickly than we would in some ways and so we would troubleshoot problems. You just need an internet connection, as you don’t have to download anything, and that’s really kind of nice.

Resources on Whyville

We have a blog called Everything Whyville, which has a bunch of papers looking at what we have studied, such as race on Whyville. There is actually social activism about race on Whyville, on designing avatars, on cheating and how it can actually be a positive learning activity in terms of sharing knowledge and building up ideas about science. Pam Aschbacher has also done some research on Whyville a while back on the science games. 

“The spark” - Sesame Workshop’s Panwapa: A Tool for Global Education



Brett Pierce, Executive Director of Panwapa for Sesame Workshop, talks about their global world, created for children to learn 21st century skills using Muppets.

Podcasted on January 26, 2009.

<http://tinyurl.com/RezEd-org-25>

The Origin of Panwapa

Panwapa is produced by Sesame Workshop, which is the not-for-profit company behind Sesame Street. They are based out of New York City. Our other partner with Panwapa is the Merrill Lynch Foundation, who are our funders.

The project came out of a desire to find a platform to teach 21st century skills to young kids. Panwapa is targeted to five, six, seven and eight year olds. We recognized that there was a dearth of materials -- bright and engaging materials -- out there for this age group, about how to formulate a certain kind of responsibility to engage with the world. We believed that we could use our creativity and our methodology at Sesame Workshop, to come up with a very cool, creative vehicle that would allow kids to engage with the world on their own terms, rather than be enveloped by the world in ways where they just don’t have the tools to absorb it and understand it.

“ The project came out of a desire to find a platform to teach 21st century skills to young kids. ”

Panwapa is a virtual world light -- and I say light partially because of the age group that we’re dealing with, and also partially because we only had so much funding. We therefore couldn’t go to certain kinds of virtual world depths that certainly a lot of our commercial competitors can go to. We



do see it as potentially many children's first online immersive experience. It is a totally safe environment: there is no actual writing in it nor email addresses asked for or delivered. We do, however, ask the kids what country they come from and, if you say you come from the United Kingdom, for example, we give you a name akin to United Kingdom522. This means you are the 522nd child from the United Kingdom to enter into Panwapa World.

“We are one of the only truly global virtual worlds out there for kids.”

Once you join Panwapa you are able to build your own kind of home, to decide what your favorite food, musical instrument, animal, sport activity are, and this becomes part of your identity as a Panwapa child. You can travel around the world and visit with Panwapa kids in South Africa, Bolivia, Indonesia and China. We have over 188,000 Panwapa kids, from over 180 countries that have registered into the world. You are therefore able to explore the world, leave messages -- all of which are prescribed messages -- for other kids in these other countries and hopefully they will open up their Panwapa mail and leave a message for you.

Unique Elements of Panwapa

There are a couple of distinct elements about Panwapa. First of all, we are in five languages. We work very hard not to be

an American export, to not be an English language world, exclusive to English language listeners. We had a lot of international advisors involved in the creation of Panwapa, embedding our humor, embedding our scripts, embedding our imagery, so that we didn't look like we were an export to the rest of the world. Our languages are English, Spanish, Arabic, Japanese and Mandarin. One of the distinct qualities is that I think we are one of the only truly global virtual worlds out there for kids. We are not an English [world] that then is translated for the people of Spain, or for the people of Russia. We are conceived globally.

A second unique piece is that we have Muppets characters. We come from a Sesame Street background. Although our target age is older than most Sesame Street kids, which is approximately five and younger, we have a whole new set of Muppets and they live on Panwapa Island, which is a floating island. When a child comes to visit Panwapa and lands on Panwapa Island, they are not necessarily of their country; they are just on this island that floats around on the world. They are of this world. Panwapa itself comes from the Triluba language, which is one of the four official languages from the Democratic Republic of Congo. It means “here on this Earth.”

A third unique piece is our Panwapa flags, or our Panwapa cards. They are kind of one and the same. It's like an identity card for the child. It has a picture of their avatar on it, as well as a picture of their favorite sport, activity, animal or food. One of the things that you can do in Panwapa world is reorganize the world out of geo-political groups and into food groups. For example, I may be a UK citizen, or an American citizen, but I'm also a lover of grapes. With just a click of a button, I can rearrange the world into people who love grapes, people who love noodles and people who love tacos. So there I am living on Grapeland, and my neighbors are from Finland and from Zambia because they both also like grapes. It allows you, as a user, to see yourself through a variety of different global lenses not just as a citizen of a country, but as a lover of Frisbee, or of tacos, or of tigers.

“One of the things that you can do in Panwapa world is reorganize the world out of geo-political groups and into food groups.”

I think those are some of our qualities which distinguish us from Club Penguin, for example. The last one is, well I could go on for quite awhile on this front actually, but we're not a consumer-driven virtual world. The user does not earn money and points. They do not play games to earn money to adorn their home. It is not the energy that drives Panwapa World. Another thing is, we are not in the imaginary world like Club Penguin or Dizzywood. Our playground is the globe itself. By automatically making this world where we can imagine, play and do treasure hunts, we are reinforcing some of the objectives of the project, which have to do with awareness of the wider world.

“We are not in the imaginary world like Club Penguin or Dizzywood. Our playground is the globe itself.”

Virtual World versus Traditional Media

Panwapa is a mix. There are videos on this site, four eight-minute videos, which feature six brand new Muppets characters. These are also available for broadcast, but we're not a broadcast-led kind of concept. We have been on PBS here in the States, as well as a few other places around the world. Sesame Workshop has worked in a broadcast model, where you put characters out there and they model the behavior you want your viewers to absorb and then do on their own. You put that behavior up on the screen, so the viewer sees how to behave in certain situations, whether it is a conflict resolution sort of curriculum, respect for elders, or health and nutrition, and then the kids take away those messages and do it on their own. What we wanted to do was kind of change that model around and certainly put that out there, but make this character driven, because we know that we engage kids through characters.

The internet -- and virtual worlds -- is a user-driven type of environment, so we wanted to give them the opportunity to explore it themselves, to empower them to take on our goals of the awareness of a wider world. We wanted them to appreciate similarities and value differences, to gain an understanding of and responsiveness to economic disparity in the world. Those are our three goals that drive a lot of Panwapa. We weren't going to achieve those goals through broadcast alone.

We needed an environment where the user was empowered to do that. It needed to be very safe. There is an attention towards satisfaction, in terms of the ability to network and connect with kids around the world. I don't think we've got a long way to go on that. There are limitations to Panwapa on the social networking side and certainly as compared to a lot of our virtual world competitors. It is our certain hope and desire to be able to address those kinds of relatively shallow areas as we continue on with the project.

Panwapa's use for Educators

Initially, Panwapa was created as an informal educational tool, not for formal educational settings. That's what Sesame Workshop does. They are not a company that gets involved with schools directly, but are more of an after-school organization or for home parents. The amazing thing was, when we launched in October of 2007 -- we're a little over a year old -- it was the teachers that responded most vigorously to it. It was the teachers who said they had been looking for a tool like this and nothing is out there, so help us out. Based on that, we developed a huge range of curriculum that is available.


Everything is free and is all online. If you click on the caregivers button and then you go into the teachers guide section, what you will see is a wide range of curricula from 4 week units, that have a pre-test and a post-test so that educators can kind of measure the efficacy of their time spent with Panwapa, to a much larger community citizenry project which asks kids to do a number of things. One is to identify community: what is their community? How would they define it? Is it their school? Is it their club? Is it their church? Is it their town? Once they identify community, it then takes them through a three-step process of creating a map of that community as if another Muppet character, like a 7 year-old, would come and visit them. They create a timeline of that community. How did your community become what it is today? They thus create some kind of a portrait of the community, of what makes their community unique. There are a variety of different possibilities there.

For the United Kingdom, we worked with Oxfam Education, who are very much into the global citizenry curriculum. They have taken our entire curriculum and cross-referenced it with the national standards of the United Kingdom. It is also available for educators worldwide because it is available in all five languages. In the UK particularly, it has been cross-referenced

with the national standards, so that it will facilitate youth in that country.

Future of Panwapa

Panwapa was a funded project with the Merrill Lynch Foundation initially. We all know that Merrill Lynch has been bought by Bank of America. We are talking with a variety of partners, including Google Earth, UNICEF and GreenCross International out of Geneva, which kind of has an environmental bent to it, to foment additional partnerships, which include funding as well as expertise, to bring Panwapa to the next level. Google Earth is one of the most extraordinary tools out there, yet kids eight and under don't have a really strong pull to it. It's not an attractive vehicle to them. It's too complex and has too much information. They really don't have the capacity to absorb Google Earth. Yet, it's a stunning map onto Panwapa and if we can create the scaffolding, which we think we can, so that with our world is mapped over certain simplistic elements of Google Earth, we can make that bridge between the virtual world and understanding in the real world. That is our challenge with the virtual world thing: can we get them to Panwapa? They'll have fun. They'll begin to explore the world. We want that experience to cross over to real action, though, as well.

empowered and challenged in a classroom-to-classroom. Yes, you as an individual can be challenged. But on a one-on-one experience, if you can take them through a series of sort of obstacles and problem solving challenges that empowers them to realize they do have a voice, they can bring about change. They can make a difference. If we can hold onto that feeling and then translate it out into the real world, then I think we have accomplished a lot. Virtual worlds are uniquely positioned to bring them to that place in their heads and then it's up to us to figure out ways to make sure that spark, that stimulation that they feel from their experience with the virtual world, carries over to some real world action. 

“It's up to us to figure out ways to make sure that spark, that stimulation that they feel from their experience with the virtual world, carries over to some real world action.”

Future of Virtual Worlds

I think the challenge of virtual worlds in education is how do you take that experience, which you can create so gorgeously in an online environment, and make sure that kids, especially these young kids, leave this world with a sense of empowerment to take on similar challenges in the real world [...]. That is a tough call. It's really a tough call for six year olds, seven year olds, eight year olds. That is the challenge ahead.

The positive of virtual worlds in education is that, unlike almost any other experience, they are solely and uniquely

The University of There



Frank Whiting, the Dean of the University of There, discusses his work with There.com and the educational models of using There in classroom settings.

Podcasted on December 15, 2008.

<http://tinyurl.com/RezEd-org-22>

Background on Frank Whiting

I'm Frank Whiting and I'm an instructor for Shasta College in Northern California. I also am the Dean of the University of There for There.com, the virtual world. I also work for Forteris Systems as well. My primary employment is in college education and there I teach computer science. And I've been doing that for a lot of years; my first computer had 750 vacuum tubes in it.

I got started in chat room operations in sort of semi-virtual situations in 1991 with American Online, and I ran a math room there for a number of years. Then I gradually fell into a community of an actually beautiful virtual world that sort of collapsed, which was Uru, the derivative of a Myst Online-driven series of worlds, and we actually had an online service. Then I became a refugee from that into There.com; that was March of 2004. In June 2004, we established the University of There, which I have been running ever since. I've been around in virtual worlds since their birth, pretty much.

There.com

There are two classes of virtual worlds out there right now. One of them is academic experiments and others are either large social or large gaming environments. Large gaming environments, group gaming, would be the massive multi-complex online role playing game, World of War Craft. Another one would be the social worlds out there. There are a lot of social worlds. There is a social world. However, it's unique in that it's PG13. It has no adult content to speak of and, interestingly, it proves that both adults and teenagers can find entertainment and enjoyment in the virtual world without engaging in cyber sex or anything of that nature.

As a community online, There is significantly different than a number of other virtual worlds. It has a very equal balance between male and female, which is different with some of the other virtual world playing games. Another thing is that the content is pretty well managed so that we don't have nudity and so forth. It is very much like the environment you would find on a college campus, meaning that there is free discussion and friendly chat, but we usually behave in a fairly adult mature manner.



Kids like it. There are lots of things to do, such as racing, games and of course virtual education. Bear in mind, this is a play world. It is not a real world. I am not paid by them. The University of There is entirely supported by member content and member volunteer activities. Well, we do have qualified instructors; we teach a lot of subjects that actually fit into real world. For instance, the core courses we're doing include a painter, which is Therepainter, an objective creating/editing tool, PaintShop Pro, as well as Gmax, which is a 3Dmax for gamers, which you can actually afford. We do courses on the history of ancient Egypt. We have a museum of history art and natural history. We have a school of flight, which is actually simulated flight in There. We also have things like soccer games and dog handling as well.

The University of There was cooked up together between myself and There staff, on June 21, 2004. The idea was to have a participative teaching and learning venue for Thereians and also a facility available for outside instruction for experimental instruction in virtual worlds. Currently, for instance, we're hosting San Francisco State University Communications

“ I question where the boundary is between real and virtual. ”

Department and they are doing work on teaching environmental studies in virtual environments, which turns out to work really well.

There Potential

There are two things that I would very much like to do. One of them, and we're going to experiment with this during the spring semester in January hopefully, is we would like to have more real world courses. For example, There has a large Philippine component and I have a volunteer who wants to teach Tagalog. We also would like to do more, as it's a perfect venue for teaching foreign languages because you can act out and you have emotes and so on. It is ideal for foreign languages and we would like to do more of that. We did do a French course, which worked fairly well, but we would like to continue in that area.

Another thing is, we have a lot of people who are qualified instructors in real life, who volunteer and I would very much like to see us do a general educational development course in There. I want to get an institutional sponsor for that because we're basically a member-supported facility and so we would like to remain a support facility for outside academic institutions, as well as for our own internal activities. The only real rule is that if you're going to operate in There, although we can set up private worlds for you, private sections, we would much rather you make it open to Thereians to attend the classes as well.

Higher Ed in There

New York Law School has been running State of Play in There for some time, and doing experimental lecturing. The Stanford Law School has been doing the same. We've also had a class in media that has been run by Oregon State University, and whether or not they are going to restart again, we're not quite sure. They haven't started another semester for January yet, but I have hopes they will. As I said, San Francisco State is active in There and we hope to invite more facilities and educators to come in and use the facility, which we can provide for free. It's not like we're going to charge them for real estate if it's opened to Thereians, meaning other people can come and attend the classes also; then we wouldn't charge them for a classroom.

This is the real reason why I'm involved in There, because this dovetails with what I teach in the outside world in real

(although I question where the boundary is between real and virtual). We're approaching the point where education becomes much more immersive. Currently Shasta College is using a program called Angel, which is a linked system of educational support, but it's not a virtual world. The next step for us, and I think for a lot of major institutions, is going to be virtual classrooms, where you can actually see your classmates, talk with them, look at them, look at the instructor and also see media such as film or slides in real time right there in front of you, all of which is currently in the state of art. When I sit in my computer lab, I know these guys are Googling the stuff I'm saying, so I'm very careful not to provide any baloney.

Limitations to There

Currently the technical requirements are fairly steep. I think you have to have a broadband connection for sure. You also have to have, if you're going to have highly interactive modes, a pretty high-end video system. What is happening is the technology is rolling up so fast, that almost everyone who buys a computer and has bought one in the past year or two, is quite able to get into There or even one of the more advanced virtual worlds and participate.

I think that another barrier may be cultural, in terms of expanding this beyond North America and Northern Europe and so on. We have to develop the culture appreciation of interactive computers as a learning tool and immersive education as a learning environment. That is all going to come to pass, and soon.

Anytime you care to visit There.com, please just drop in and ask any island guide to let you go to the University of There. ☺

Quest Atlantis In The Classroom



Donna Stevens, Director of Implementations for Quest Atlantis, discusses this project and its effects on learning in the classroom.

Podcasted on July 14, 2008.

<http://tinyurl.com/RezEd-org-9>

Quest Atlantis at a Glance

Quest Atlantis is a 3D web-based video gaming environment that allows children to explore curricular content. You can do science experiments. It's a 3D virtual world where kids have an avatar or character that they adopt, and they can literally walk through space and talk to people: talk to either real people, if there are other children in the space at the time -- whether that is a child in the neighboring town or a child in Australia, Singapore or Chile. It allows children, as I said, to explore and learn things on their own in a video game environment, in a medium that our kids are very comfortable with. That is a quick overview. There is a 3D window, there is a chat space where they can speak and there is a sidebar where they actually can see those interactions, collect things such as maps and rocks and all sorts of things. It does feel very much like a game.

“At Quest Atlantis we are trying to position students in a way such that they are producers of knowledge rather than just being consumers.”

Educational Goals for Quest Atlantis

At Quest Atlantis [QA] we are trying to position students in such a way that they are producers of knowledge rather than just being consumers. Our traditional educational system has really been one where teachers are the ones who possess the knowledge and they distribute it to their kids who then need

to digest it and spit it back out. We call that learning. What we are trying to do at QA is actually adopt what we call an “inquiry learning” model where children are the ones to ask the questions, to inquire what is important: Why do I need to have this information?

They are actually producing that knowledge and so there is a shift both in the way students approach education, but also in the ways teachers are approaching it. They are no longer the ones possessing all of the knowledge. They are really facilitators there to help probe a little more deeply, to get the kids thinking more about why learning is important, why the learning curriculum is important, and how that is meaningful in their lives.

Challenges to Incorporating QA in Educational Settings

From the student perspective, it is not as big a shift as one might think. I think kids are really hungry for that opportunity to have learning be meaningful. They come to school thinking, “OK it's my role to come to school and sit here and to wait for knowledge to be passed to me and to figure out when I can spit that back.” To suddenly be in a position of power and of being able to really understand and make those con-

“We brought Quest Atlantis in and suddenly this child just lit up.”

nections, I think is really exciting. I think from a student perspective the challenges are not so great. It is difficult, I think, for some teachers to give up that sense of “I know everything and I need to pass it along.” It is especially difficult in the US with “No Child Left Behind,” and with all the regulations and requirements that teachers need to meet these days to be sure that their meeting legislative goals.

Some of the biggest challenges we have as teachers are that, as students get into the program, they can't get enough of it. Teachers are calling or emailing saying, “We have 200 students at my school and one computer lab with 30 computers. We all want to be able to use this and we just don't have the time.” Once teachers get comfortable with the idea that they can facilitate, and once they see those learning games that start



occurring when kids start using this program, it becomes an easier sell for them, to be able to give up that role of power and watch their kids produce knowledge in that way.

Educational Outcomes of Quest Atlantis

There are some really exciting outcomes from the project. In this last year we have really scaled up, so we have done a lot of training. We have had a grant to expand to North Carolina. Some of the stories that I'm hearing, especially from our learning challenged community, have been really exciting. One story in particular I'll share with you now.

One teacher who had contacted me teaches students who have really been identified as having learning challenges or are very disengaged and may have home problems. She had one student who literally was homeless, living in a car -- a very difficult home situation -- and had totally become disenfranchised from school -- totally disengaged. A sixth grade student reading at a second grade reading level. They had been trying to help this kid for a long time. Well, we brought Quest Atlantis in and suddenly this child just lit up. I would get these phone calls from her and she would say, "You know he's always so disengaged but now he's calling me and asking if he

can read stories that are similar to Quest Atlantis. He is asking me if we can spend more time in the computer lab and so I'm trying to indulge him, is that OK?" I'm trying to reassure her that, "Oh yes, that's just fine."

I continue getting phone calls like this. "Gosh this boy is now emerging as a leader in the school. He uses it so much; his self-esteem is really becoming bolstered because he's the resident expert. He has never been in that position before, to have other kids look up to him, and it's really done a lot for his self-esteem." One of the last phone calls I got, and this is just over about four months ago, they had done an assessment where he was at a second grade, fourth month reading level at the beginning of the year. Within a couple of months, he had jumped to a fourth grade ninth month reading level. So a two and half year jump in about two months of using the program. Since this was the only place where he really was excited about learning, and really was doing well, this teacher was absolutely convinced it was because of QA.

I think because it is a very innovative, interactive, exciting arena for learning, it really does reach those kids that we were having trouble reaching. Certainly for kids that are doing well, we see them tend to do better, but for those kids that we have

had trouble connecting to in our schools or connecting with in our schools, this really becomes a medium that reaches them. It allows them to still have some educational growth, and certainly some educational games.

What Sets QA apart?

There are a couple of other 3D learning environments, things like Second Life that are sort of on the forefront now. One of the things that makes Quest Atlantis different is a controlled environment. It is for children ages nine through fourteen and we are very careful to screen those students and their teachers so that only students and teachers are in the space. Maybe an occasional researcher, or a QA team member might enter, but it is not something that's open commercially so it's much safer environment. That makes both teachers who are a little frightened of this new emerging world, and especially parents, much more comfortable.


One of the big things that I think is different about QA than any other sort of similar platform out there is that there are lots of platforms that certainly adopt this video gaming, the entertainment side of things, and a lot of games that have a learning focus. But one of the things that makes QA different is that we also focus on what we call the social commitments. Every learning experience and even our play experiences in QA are all tied to a particular idea about what it means to be a socially committed person in the world. So that when I am learning about water quality in science, maybe there's a real world application. I can take this knowledge that I have just learned and work around my own environment and say, "You know this is something that I can bring back to my real community and I can make a difference in the world." I think that's something that really sets us apart. There are a lot of games that try to do a lot of different things but as far as I'm aware, we are one of the few successful projects that really, truly integrates that idea of social responsibility and growth, as well as learning and entertainment.

Quest Atlantis in a New Age of Education

One of the things that we discover is that kids are really hungry to learn. I think that's not something that most teachers

would say. Most teachers would say, "Well my kids are apathetic." You know today's societies are apathetic and they do not want to be here, we are fighting a losing battle. It is hard to compete with the flashiness of video games and iPods, and IMing and all sorts of other technology that is out there. Kids are really hungry to learn, but we need to speak their language.

Many of us are still teaching the ways we did fifty years ago and the world has changed. It is flashier. It is more exciting. When my daughter, who is sixteen, is doing homework she is listening to her iPod, she is IMing, she has the TV on, probably a stereo too and she is an "A" student. There is a multi-faceted way of approaching life these days that we really need to address with our kids. If we just sort of stand in front of a classroom and do what we used to do, it's not going to work anymore. Kids are hungry for it, but we need to be sure we speak their language.

Quest Atlantis has the opportunity to relate to children all over the world, to engage them in the game and to actually be producers of knowledge, that is their language. Now we are talking in a way that they understand, in a way that is exciting to them and, in turn, we start seeing the kinds of games and learning that we've hoped for all along. I don't think we need to throw in the towel. We just need to look for those opportunities to really speak the language of our kids. When we do that, I think we'll find that we'll be able to reach them and they will learn exactly what we hoped they had and maybe more. 

“Kids are really hungry to learn, but we need to speak their language.”

"Collaborative Play" - The Educational Applications of Dizzywood



Scott Arpajan, co-founder and general manager of Dizzywood, and Patti Pucell, principle of Bel Aire Elementary School in Tiburon, California, discuss the uses of Dizzywood in educational settings.

Podcasted on September 22, 2008.

<http://tinyurl.com/RezEd-org-15>

The History of Dizzywood

Scott: Dizzywood is a virtual world and social game for kids in the elementary school age range. It is a place for them to gather, engage in lots of activities, to have a lot of fun. As we like to say, "engage in collaborative play," where they are working toward shared objectives all in a sort of entertaining, story-driven background. It is a completely safe online place for them to hang out and through the ability to work together there's an opportunity to teach kids about basic learning experiences and have them work towards that kind of notion of shared goals, which I mentioned before -- the idea that they are working together. So they are doing teamwork, they are collaborating in an entertaining place but with a lot more depth and meaning.



“The key thing about Dizzywood is the focus on collaborative play.”

The story about how Dizzywood came about actually starts with some ideas that were coming around the time that there were not many choices for kids in this age range. That's obviously changed. Even in the time Dizzywood has been up and about -- we actually launched into beta about a year ago -- just in that time there has certainly been a lot more kids' virtual worlds that have come into play. We actually got started on it several years ago. When my co-founders and I were out there looking at what was available in this age range, we were

frankly a little disappointed. We saw that there were certainly a lot of places for kids to go, but they lacked depth. There were places where kids could be entertained but it was usually in the form of menu driven and casual game sites, meaning they could play a bunch of little flash mini games over and over with nothing really tying that experience together.

We saw an opportunity to build a world that actually existed in story and that kids would drive their own story forward; they would be able to interact and kind of progress and move forward. Again, the key thing about Dizzywood is the focus on collaborative play. The idea is you could not engage in Dizzywood on a solo play experience, but you quickly learn that because it's a virtual world and there are other kids there, by working together using teamwork, cooperation and collaboration, you actually just might have a better time. It's more fun. Rewards come faster and you really learn the value of working together. What we set out to do was build that world which we saw as being very different from all the other choices that were out there.

Dizzywood in an Elementary School

Patti: Well actually, what happened is that I come from a school where we have a one-to-one laptop program for our students. My school serves students in grades 3, 4 and 5, which is just about ages 8 through 12. Students were constantly engaging in all kinds of activities and one of the things we were trying to teach was digital citizenship, which is part of our character educational program. We realized that, just like anything else, in order to get good at that, you have to practice it and where kids go to play nowadays is in virtual worlds.

Welcome to Dizzywood



“It was a great opportunity for kids to get just a little bit under the hood of virtual world.”

I happened to see an article in a local newspaper about a man who was starting a new virtual world for kids who lived in our community, so I called him and I asked him to come on down to see if there was any way we could work together so that students at this school got a chance to practice their skills of digital citizenship in a place where they go to play after school. That is how he came.

From our end, we took what we call our character pillars -- our character program, which are things such as responsibility, fairness and trustworthiness -- and we checked out what we call nouns, those things we teach kids. Scott gave us the opportunity, through Dizzywood, to let the kids go in, play, to actually try and practice and put those [pillars] into play. They had to talk about being responsible and how that would look, and being fair with one another and what that looked like. Then they also learned a lot about cyber safety and all the pieces that go along with that. Scott did some other things from his end in terms of teaching them about virtual worlds.

Scott: The first goal of any virtual world for kids is to be fun and entertaining and that certainly was what we wanted to do. The curriculum we developed was largely deep in actually using the world as Patti was describing, to allow kids to learn while they are in there. We also saw an opportunity again because the learning environment can teach us a little bit more about how a virtual world is put together and that gave some important background, as kids are learning that virtual worlds still have very real people behind them. So other players are real people; people who make the worlds are real people.

So, the kids actually engaged in a series of activities on learning about how storyboards work, about characters, how the technology actually works, about safety and security being online, and something about rules of engagement and codes of conduct and dealing with other players. We had some of our programmers come in and kids actually started developing some story lines that they could later see play out in Dizzywood. It was a great opportunity for kids to get just a little bit under the hood of virtual worlds and see what goes on there.

The Educational Perspective

Scott: The first thing we learned was [that] it is absolutely rewarding. So the notion that as a virtual world you can get involved in a learning environment in a classroom setting and make it work is a very rewarding experience, just on its own merits. Being involved within your own community is a great thing to do, even as a company. Specific things that I think we learned are that there is a lot of opportunity. We were happy with what we were able to accomplish in a pilot setting in the classroom. I think the next step for us is to think about how they can really scale. It took a lot of time and effort on our parts, you know, completely worth it, but thinking about how we can take that program and make it work through multiple classrooms is a project for us over the next few months. Also, just simply put, getting your product out there and seeing twenty-five kids playing with the product taught us a lot.

Patti: From my perspective, I think we saw that virtual worlds were a new place that we can tap into in the interest of children. I think it's absolutely limitless as an instructional tool someday. What we saw was that different kinds of learners responded to it. We are a public school and Scott, when we talked about doing this pilot, wanted a mix of children [...] that were all different ranges. We had several children in the room that had very severe special needs and we could see that children really responded to it and they were able to become focused and engaged. It could very well be a new way to teach someday. The other part with that is my teachers were really excited about it. Every time they got into it, they kept thinking of another way they could use it across many different subject areas.

“Thinking about ways that this effort can scale is really important for the next steps.”

I think the platform is limitless in terms of how it could be used for teaching children and reaching children in a different way. The generation of children we have now coming up: this is their kind of world. There really is an onus on us as educators to reach them and to understand where they go, what they play, and what they turn onto. So, as far as my staff was concerned, the more they learn about this and the more they

understand these new platforms for children, the better they will be able to use those as part of an instructional program.

Expanding the Use of Dizzywood


Patti: We have invited Dizzywood back and asked them to expand into other grade levels, and also into some teacher training, possibly even some parent training. We want to do it one more time. In fact, we're going to be meeting in about a half hour with some teachers to plan around two of these pilots just to see how children respond. This time will be a little different because when we did it last spring the children had already been in a character education and digital citizenship program for a good part of the year. This time we are going to launch it as part of that digital citizenship program, so it's going to have a different focus.

“The key there in the virtual environment is really about co-presence or community.”

We would also like Dizzywood to help us with some parent education because, as parents just continue to be afraid of these places and their kids go home and sneak and do them anyway in all different places and sometimes they can get themselves in the wrong kind of worlds, it's really important that parents understand, just like our teachers did. So that's our next step right now is to expand the program a little bit and train more adults.

Scott: What we see as the second phase of the pilot program we're doing here with Bel Aire, and everything that Patti has mentioned, is what we are really excited about. I mean certainly, as folks who build virtual worlds, we spend an enormous amount of time making them safe, making them fun, making them places kids want to be, but we also recognize there're still a lot of challenges ahead of us in terms of, as Patti touched on, parents. I think parents hear about other virtual worlds, maybe ones that are aimed at teens or young adults, or online games, and sort of get the wrong concerns or impressions about what these are all about. So this is an opportunity for us to really show everything that a virtual world for kids can be and really get the education out to parents, as well as to schools and educators, because kids are already coming. We want to get this support from the com-

munity and this is a great step for us.

I think I touched on this earlier, for us this program is pretty special because we're involved in it very personally. We actually go to classrooms and we participate in the classroom with kids. That does not particularly scale well. It would be impossible for us to globe trot around the country, or the world for that matter, and be in every single school. So, thinking about ways that this effort can scale is really important for the next steps. We are going to plan on doing something that's a little more self-run by teachers and we also encourage other virtual worlds, since there're a growing number of virtual worlds in kids' spaces, to encourage other virtual worlds to do the same and get involved in their local communities and their schools as well. 

"Built by educators, for educators" - The Wonderland Education Grid

Aaron Walsh, Grid Institute Founding Director, as well as the Founding Director and lead architect of the Media Grid, discusses Wonderland Education Grid and the potential for immersive education.

Podcasted on December 29, 2008.

<http://tinyurl.com/RezEd-org-23>



people together in a shared space naturally what you want to do is collaborate. So there are some basic collaboration services, such as multi-user co-presence, which is getting people together and being able to see one another's character or avatar in the shared space. There is also the ability to talk, voice over the internet, being able to chat, as well as being able to share applications. I mentioned one of the things that some virtual world platforms, such as Wonderland, can do, which is we can get together in a shared virtual space and using the collaboration services of the education grid. I can show my students how to use an application. I can then step back and let them take control of it, so that they can show me how they are using it and we can work together in a collaborative sense.

Finally, academic services is the third category. You as an educator need to be able to assess what your learners or students are doing and be able to assign grades to them, be able to track what activities they are engaged with, whether or not they completed the lessons or abandoned them; those type of academic services are very important as well. In summary, the Education Grid provides services to virtual worlds and provides three categories of services: content services, collaboration services and academic services.

Virtual worlds have been around for a long time now. I was involved in the development of some of these key technologies standards for more than a decade now. For the longest time, we kept waiting for the educational side to emerge and it didn't. So it was out of necessity that the Immersive Education Initiative, which this is happening under, was born. The Education Grid is being built by educators for educators. Traditionally, virtual worlds had been used for entertainment and for commercial purposes, and the education community needs very specific services available for it and that's why it was born.

The Immersive Education Initiative

The Immersive Education Initiative is part of the Media Grid Standards Group, which was founded in 2005, to create open standards for new generations of network applications; specifically, applications that use large amounts of beta, large amounts of computing power, and large amounts of informa-

“It fundamentally changes the role of the educator.”

Three Categories of Service

The Education Grid is a network of computers that provide services to virtual world clients. When you think about what is necessary for virtual worlds or learning games or learning simulators, there are two major components. There's the client side, which is what the student, the teacher, the learner installs on their desktop or laptop computer, and they run that software. The other is the server side, which provides services to the software that is running on the computer, on the end user's computer.



The Education Grid is all about the server side. It provides services to the virtual worlds, to the simulators and to the learning games. Fundamentally, it provides three core types of services. The first type is content delivery. It is responsible for getting content into the virtual worlds, which is the virtual worlds themselves, and also the videos, the audios, the images and in some cases the applications: where for example, Wonderland, and some other virtual worlds, can run applications inside of their worlds. So service category one is content.

Category two is collaboration services. Currently, we don't do much learning by ourselves. We often have a leader, a guide, a teacher, a collaborator or fellow students here. In any sense, we have people together in a shared space and when you have

tion being collected and distributed over the internet. Inside of that standard group, there are different activities, one of which is immersive education. Immersive education is really an application of media group technology, and the Immersive Education Initiative, as the name implies is an initiative that is actually a collaboration among researchers, universities, students, graduate students, organizations and companies working together to define and develop a new range of standards for education in this space.

Presently, we are approaching about 400 members, and even that is growing at a pretty fast rate; two to three new members join a day. So the Immersive Education Initiative, which was only launched a year ago, has grown now to 400 participants and every week is rapidly growing. In terms of types of organizations that are involved, we have all sorts of educators, from all corners of the planet really. It's not a United States-based effort; it's international. That is primarily the makeup of the Immersive Education Initiative, where today it is primarily universities and higher education. We are now getting a lot of K-12 involved, as well as organizations and companies. One company of course, is Sun Microsystems. Their Wonderland technology was what we launched on the grid earlier, just a few weeks ago. Sun is a good example of a company that is participating in the space. Although it's primarily educators, there are organizations and companies as well that are providing technology and assistance in growing these standards.

The Education Grid

We are giving early access and soliciting a lot of feedback from our community. One of the things that we did, which is almost unheard of when you launch something like this, is we opened it up, we invited everybody who had an interest, who was in the academic community, to come kick the tires and experience it, even in its very early form. This still is considered alpha release. It's not even at the beta stage. When you think about the general steps that happen on the way to a product or a technology becoming commercially available or widely available, it goes traditionally at a research level. Then it goes into an alpha, which is a prototype if you will and subject to a lot of changes. Eventually, it settles into a beta stage, which is a cycle of development that happens when you are getting prepared to release it. It then goes to a golden master, or 1.0 release.

During these range of steps that need to happen, typically the public isn't involved until a very late beta, if they get into a

beta at all. Since this is an educational project and it's meant to service the educational community, we opened it up at an early alpha stage and we invited people in and are already approaching 250 people working on the Education Grid right now. Almost all of them are academic, from K-12 and higher education. We did that because we wanted to give people early access, to invite them to participate in how it should be used and how it can be built out. It is very much a collaboration between the developers of the technology and the education community that we service.

Distance Learning: A Brief History

Very simply, the Education Grid is to be used by educators to host their own courses, to meet with students, to meet with learners in a virtual space, to deliver lectures and to teach and train in virtual environments. The key there in the virtual environment is really about co-presence or community. Distance learning for the longest time has been conducted typically and originally by sending paper materials through the mail. The students would then do the work on their own and send it back to the teacher. At first, you were able to broadcast through satellite or through cable television channels -- you were able to broadcast lectures to the students sitting at home.

“Do students need to be on a campus if you unlock learning so that it's interesting and that it is largely self-directed?”

Eventually, it got to the stage where computer technology was involved and that allows the students to really get back into the classroom, even though they are remote. The way to respond is by posting questions and participating, as if they were there in the classroom. What was missing from that was the sense of presence. There're lots of distance learning classes going on where students are communicating by email, using things such as social networks more and more. What was missing was the sense of person, a sense of identity of being there together. What the virtual worlds give us is the ability for a student and the teachers to have what are called avatars, characters that they are represented by in the virtual space, and for us to get together, for me to see my students and for them to see me and for us to be able to talk and hear one another and collaborate.

So it's at the earliest of what we call the low hanging fruit of immersive education -- simply getting together with students and using the voice collaboration features to conduct lectures. The same basic lectures that you might give in the classroom, you can now give on the Education Grid and reach students who are remote that you may not be able to reach otherwise. That's the low hanging fruit. It's very easy to do and has great value. We are able to extend the classroom and students really do feel like they're part of a classroom, even when they are remote. So that's the easiest thing people can do right now and that's what the Education Grid is set up and facilitating this very moment.

Then we can get to higher orders of the technology, things that you can do that take more work to build, but are more effective as well. That is a lot of self directed learning, simulations and simulators, learning games, very sophisticated uses of the technology, where students can go into a virtual space -- a virtual world -- and they can meet with other students from around the world or their own classroom, or by themselves. They can go through directed simulations and directed learning environments and really exhaust the interests that they have because there's no cap on time or space. They are able to go through and do a lot of "what if" scenarios.

For example, for the rain forest: "What if I were to rip up all these plants right over here and replace it with corn. How would that affect the ecosystem?" and that simulation could play forward. Or: "what if I changed the rainfall and gave this rain forest a semi-draught for a month. What would that do? How about if the animals in the rain forest ate all the berries?" These types of scenarios, which in the traditional class you wouldn't have time to really explore and, even if the students ask questions, you would probably would not have the detailed answer; it is a perfect scenario for a learning game or a learning simulator where the computer can do a lot of these "what ifs." A student can play with those questions and they can see the result run out very quickly. Instead of waiting twenty years to see what the result is, the simulator can run forward and change the environment right on the fly there, to see what it's like and to see what the environment is like. This is one example of the advanced use of the technology.

Another good example would be architecture -- walking through ancient spaces: "What was it like to really live in a Mayan civilization? "What did it take to climb up on the pyramids, for example, or to go through the tomb?" "What if you

were designing the Sistine Chapel? What would it mean to get on your back and paint?" Well, these are the types of visualizations and simulations that can be done quite easily inside the virtual space. There are really a range of things that can be done, and we are just now tapping the very beginning of this potential. It is a very early stage compared to what's possible. I think over the next three to five years, as the teachers get more comfortable with the tools, as the tools themselves get better, we are going to see an exponential leap forward, with the types of things that are happening in immersive education and on the Education Grid.

Future for Education within the Education Grid

Immersive education has a lot of potential, some being realized today, but we're just starting to scratch the surface. It also brings up a lot of questions. One of the questions that frequently comes up from educators and also from students is: What is the future of education? What is the future of the text book? What is the future of the institution? Do students need to be on a campus, do they need to be in a school system, if you unlock learning so that it's interesting and that it is largely self-directed, where the students can get to it and explore their interest with high-grade simulations and learning games that increase and it brings students into the learning process? If that happens at the rate we expect it's going to happen -- this solely based on the evidence that we have today about how students are engaging in these environments -- when that happens what is the role of the teacher, comes into play. A question that is often asked is, "Are teachers needed?" The answer is certainly that they are needed, but their roles, I believe, will change. I think one of the most powerful uses of this technology is to free the teacher to go back to being a mentor, to being a guide or facilitator.

If you think about a lot of common practice in teaching today, it's very regimented for the most part and it is very formulaic. For the longest time, for example, I was going to my classes. I had a wedge of time to get a certain amount of information out and I had to get it to the students. Then we wrapped up and went home for the day. It typically went like this: I go in, I lecture, we do some exercises, I take one or two questions and then we were out of time and the students would go home. We come back next week and do the same thing over again. We had about fourteen classes to get all the information I could to the students. There wasn't a lot of time for personal interactions and there was almost no time for a

question and answer session back and forth that you would really want for a good learning experience for the student. They should be able to ask questions and teachers should be able to answer those, but we were pressed for time.

This technology gives you the ability, as an educator, to put the very best of you into a virtual learning environment. I no longer have to repeat the same things semester after semester. If I put the very best of what I know into these virtual reality immersive educational learning environment, the very best of my teaching style, that then frees me up in terms of time and I'm able to communicate with the students at a depth that previously wasn't possible. Students can go through all the material in an immersive education environment, and that entire hour of time that I would normally give a lecture, now frees up for me to answer questions in an open-ended way. My role as an educator changes. I'm no longer standing up and presenting, giving information and then wrapping up at the end of the day. I instead put myself in the virtual environment, and the students, using self-directed technology, explore that to the depth that they want to and then I'm available to answer questions, to talk to and to guide. It fundamentally changes the role of the educator. It gives me the time to really connect with my students in a way that just isn't possible today [in a classroom]. ☺

"A foot in the door" - Google's Lively in a University Setting



Ryan Clemens, who is a Technology Support Analyst Principal at the Arizona State University, talks about Lively, a virtual world launched, and closed, by Google in 2008. This interview was held before the close of Lively was announced.

Podcasted on November 3, 2008.

<http://tinyurl.com/RezEd-org-19>

On ALT-I

My name is Ryan Clemens. I work for the Applied Learning Technologies Institute at Arizona State University [ASU]. Within the Applied Technologies Institute, there is a Division of the University of Technology office, which is kind of the ASU's IT department. In particular, ALT-I has a series of instructional designers, server-side programmers, graphic artist, researchers, students, faculty and instructors that all work together towards a common goal of doing educational technology. In particular there're six different divisions within ALT-I. I work for the Technology Integration Division and so I kind of work on taking on the latest, greatest, coolest technology out there and applying it to our learning platforms.



My title is Technology Support Analyst Principal, which is pretty much a really long terminology for me being a geek. I am basically a web developer, graphic designer, backend programmer. I work on a lot of different projects from all aspects, such as from taking conceptual ideas to their completion. Lately I've been focusing more on our educational gaming initiatives to really take those development skills that



I have and start to build some online web-based video games from an educational aspect to help our online and face-to-face students, as well, at ASU.

An Overview of Lively

Lively is Google's recent launch into the virtual world. It's still in beta so it's still pretty new but with the latest interest in virtual worlds just across the board, Google felt it was time for them to step into the market and this is their product.

There is not a lot that you can do with it... well, I shouldn't say there isn't a lot to do with it, but it's not quite as robust as a lot of the other different online-based virtual worlds out there. It is in beta stage and kind of Google's fashion of the way they treat a lot of their products, which is they kind of throw it out there. People play with what there is and they kind of listen to the community and direct the project that they are working on towards what the community needs. That's kind of what they're working on right now.

If you just go to Lively.com you can log on. The first thing that you will be prompted to [do is] download the plug-in, which is the nice thing about Lively -- that it acts much like the flash plug-in where it's fairly seamless. There is a quick download and a quick install process, and then you are up and running. A lot of other virtual worlds require a fairly intensive download and install process and then sometimes the computer restarts; you get just up and start using the product. Lively is not like that, which is one of the coolest features I have seen and most useful features. I deal with a lot of online students and those online students are the older population, not the younger kids, and so there're a lot of technology barriers. For that alone it's a big advantage for people who don't really know how to troubleshoot.

“ It is basically a fairly easy to use virtual world that you can kind of go into and just start playing with. ”

Anyway, when you first log on you'll see a bunch of rooms. You can literally click on a room and it takes you to an environment and you can start chatting with people. Right now the interactions are chat, obviously. There is a chat window at the bottom of the page and when you talk your chat bubble



Above, images from Google's Lively.

appears over your head. You can then have conversations with people that are in that room. You can also move your avatar around. There're different animations that your avatar has and you can interact with other avatars as well, as far as if you wanted to shake someone's hand or even you could play fight with them as well, and everything in between. You literally just click on their avatar, pick the animation you want to apply and kind of interact in that way. That's a basic overview of the fundamental technologies. It is basically a fairly easy to use virtual world that you can kind of go into and just start playing with. It's really helpful for people who do not have experience with virtual worlds at all, as it is an easy entry to virtual worlds for people.

“I think it really gives you a foot in the door to help you explore this new realm and try to get a taste of it.”

For people who aren't used to virtual worlds, who may be afraid of them, I think it really gives you a foot in the door to help you explore this new realm and try to get a taste of it and then maybe proceed to some of the other virtual worlds. Plus, it's all web-based so it's embeddable and you can create your own room and place it inside your learning management system, whether it's Blackboard, WebCT, which is the same, or Sakai. You can literally create a room for virtual office hours, for example, and take that room and put it on the home page and say come visit me between the hours of seven and nine and we can talk about your project and do it in more of a face-to-face type of environment.


ASU and Lively

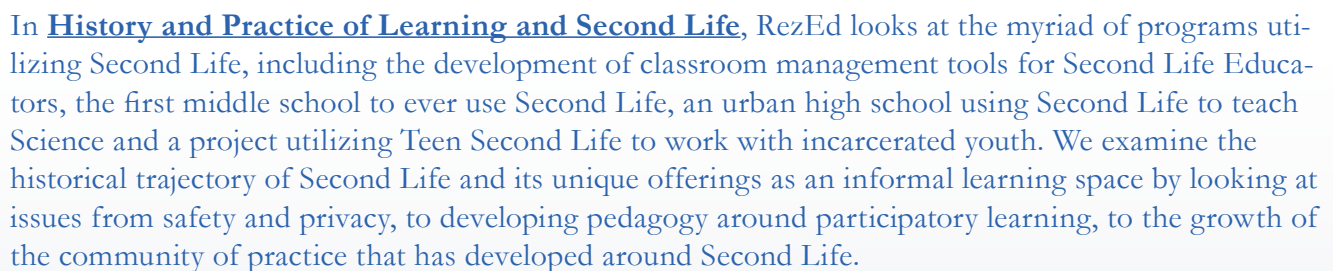
ASU has a unique relationship with Google, being that we have a close partnership with them and work closely [with] them on a lot of different projects. We were the first university, I'm pretty sure, to implement Google Gmail into our infrastructure and completely replace our email system for our students. They came to us with this new project because of those partnerships. It wasn't called Lively at the time, but was under its alpha name. They said, "We've got this thing coming out. Do you guys want to help us test it, play with it and see what we can do with it?" We of course were more than happy to do that.

It started off where we just played with it, exploring the technology to see how far we could push it. Then they took it to market and had a beta soft launch with it. They threw it out there to see what kind of feedback there was. They had overwhelming downloads within the first twenty-four hours. It completely exceeded their expectations and they were happy to see that. We have a couple of different other projects at ASU that we are working on and we were trying to implement Lively as much as possible within these projects.

When under the alpha name, when we were still kind of playing with Lively, we started 2000 of our students as beta testers for their product. Google took that information to help them develop it. One of the things that we are working on now is working with a few select instructors to evaluate how they would like to see Lively used and integrated into their classrooms.

Finally one of the other projects that I can tell you briefly about is the Our Courts project with Justice Day O'Connor that we've been working on with them to basically integrate Lively into a civics education game to teach kids about the judicial system. Then hopefully, once that becomes a success, expand that onto the other branches of the government. This project is in partnership with ASU, Sandra Day O'Connor College of Law here at ASU, as well as the Georgetown University Law Center.

I think as Lively in particular develops and advances as well as other online virtual worlds, you're going to see more and more integration into the classroom to the point where you could completely teach a class in an online virtual world and get a degree, or something like that. I think you're just going to see it grow and grow. 



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From Linden World to Second Life: Parting Words From a Founding Mother



Robin Harper, former Vice President of Marketing and Community Development for Linden Lab, spoke to RezEd in her last week before stepping down. She discussed the history of educational uses of Second Life.

Podcasted on February 23, 2009.

<http://tinyurl.com/RezEd-org-27>

In The Beginning

When I started at Linden Lab in 2002, it was actually the first day of April. There were no people in Second Life and we were just getting ready to bring in the alpha testers and open the world up, which at that time was called Linden World. Interestingly enough (that was in April) I was contacted by a professor at the University of Texas at Austin, whose name is Anne Beamish. Anne had heard Mitch Kapor talk about this new idea of a virtual world and she contacted us and said, “What do you think about me bringing my urban planning class into your virtual world, so that they can explore and see what it’s like to think about the creation of an entire new society?”

I thought that was a fabulous idea. Anne came into Second Life, [it] must have been in August because it was right at the beginning of the fall semester, and she brought a class of around seventeen urban planning and architecture students into Second Life. This group stayed with us through the alpha and into the conversion to the beta grid -- from four to sixteen regions in Second Life -- during that semester.

The work that the students did was just terrific. They wrote papers about the potential for transportation and economics, and how people would work together. What I took away from that was that there was an incredible wealth of information, opportunity and talent out there in the educational field. They could really add an enormous value to Second Life, beyond what we had originally anticipated. So from there we thought



about how to bring educators into Second Life. I created a program called Campus Second Life, and it just took off from there.

Campus Second Life

What we wanted to do was to attract college level classes into Second Life, in part because we thought, as I said, they would add value to the community, and in part because we also thought it would be an interesting way to bring interesting and talented people into Second Life as users. We gave a class an acre of land to use for the duration of a semester at no charge. All that we asked was that they keep track of what they were doing and let us know, at the end of the semester, what their project had been, if any, and what they had learned. We were looking for them to help us build Second Life into a better place for everybody else.

At the time, what we saw was that many of the classes, because they were led by professors who tended to be forward thinkers within their university environment, were very innovative. They were pushing the limits of what could be done in Second Life. There’s also an enormous breadth of experimentation because we had classes in everything from game design to urban planning to physics. It was an interesting way to explore the potential of the whole system.

Campus Second Life was growing for awhile and then it started to slow down and I didn’t have the resources to really go out and recruit or manage the program in a way that I would like. Pathfinder Linden, otherwise known as John Lester, joined my community team and he brought with him a real interest in education. He and I talked and I told him I had this really incredible program and it’s so valuable because it’s bringing people in, but we can’t hire somebody to run it. I asked him if he had any ideas on how we could jump start it and really get it going. If we couldn’t get it going, we were going to have to cancel the program.

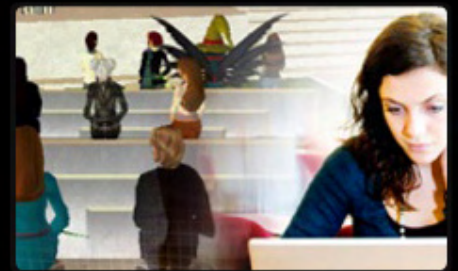
The Growth of Educator Resources

John, who had been running his own community called Braintalk, started to put some things in place that enabled

“I was so excited and a little bit proud of what I saw happening there.”



Second Life is an online, 3D virtual world imagined and created by its Residents.



the community at the time to come together more effectively and collaborate on building an educational environment within Second Life. Out of those efforts, the SLED community grew. SLED is the Second Life Educators list, which is a group of educators interested in using Second Life within their classroom. From there came the Wiki and then SimTeach and all the great work that Jeremy Kemp did. SLOO-DLE came next. It was an amazing insight into how a community can grow with the effort of the people. These were some wonderful tools that help people to collaborate and then [generated] a lot of energy, intelligence and innovation.

There are milestones for the growth of the community, certainly. I think where I first saw the real impact of the educational community and how much it had grown, was at SLCC in 2008. They put together an entire adjunct conference and it was terrific. I was so excited and a little bit proud of what I saw happening there.

At this point, Second Life is a part of the work that is being done at large university campuses all over the world. EduServe, which is a research report that was done over in the United Kingdom, showed that 80% of universities are using Second Life in some sort of way in their educational work. I think its home to campuses from universities all over the United States at this point. It has been really exciting to see how Second Life has become the main stay in higher-level education.

Surprises from Educators using Second Life

I think what's most surprising is the breadth of Second Life's use. At Maxis, we were working on SimCity, building a game. It was a new kind of game certainly, but we thought of it purely as entertainment. What we saw happen was teachers looked at it and they said, "Wow, here's a really interesting way to teach kids about math, budgeting, how the utility grid works, about politics and being a mayor. It shows what

“80% of universities are using Second Life in some sort of way in their educational work.”

it means to try and build a city.” SimCity made its way into the schools and became an interesting and very useful tool. I think we’re seeing something like that here with Second Life.

In one respect, I’m not surprised because I think Second Life offers educational value similar to the way that SimCity did. The breadth, however, of the way it’s being used is what I find exciting and a little bit surprising -- when people are using the simulation aspects, the immersion, the creativity. They are using everything from lectures to distance learning to corporate training. You are able to see the incredible value that having a set of creation tools, 3D and voice hold. I don’t know if surprise is the right word, but it certainly has been very gratifying to see the extent to which people have taken those basic tools and made them valuable in learning experiences.

Future Uses for Virtual Worlds

Virtual Worlds have the ability to bring people together in a very unique way. I think the educational community has the ability to take that characteristic and turn it into something very powerful. So I hope that whatever virtual space we’re talking about, educators are always present and willing to play a leading role in bringing people together in a way that makes the world generally a better place.

“Second Life has become the main stay in higher-level education.”

The challenge continues to be one of access. There are communities in the real world that don’t have the kind of broadband access that’s needed to fully participate in this environment. I hope that we can all work together to give everybody the opportunity to have this emergent experience because I think it is enormously valuable. ☺

“A pretty crazy ride” - The History of Education and Second Life



Sarah Robbins, a PhD candidate at Ball State University, discusses the importance of using virtual platforms within education and the history of the Second Life educator’s community.

Podcasted on September 8, 2008.

<http://tinyurl.com/RezEd-org-14>

Second Life Educator’s Community of Practice

My name is Sarah Robbins. In Second Life I am known as “Intellagirl Tully.” I’m actually Intellagirl all over the Internet. I’ve been teaching in Second Life for about three and a half, almost four years now. Wow. Seems like a long time. I’m a PhD Candidate at Ball State University, which is in Indiana. I’m also a consultant with a lot of other higher education institutions and companies about education and corporate training and virtual worlds. I am the editor of the Linden Lab organized SLED blog, which is the Second Life Education blog for that community. I have been doing that for about eight months now. I am also the co-author of Second Life for Dummies. All good stuff.

It has been a pretty crazy ride the last few years. I actually, strangely enough, became interested in virtual worlds about six years ago when I was pregnant with triplets and I was on bed rest. I was stuck in bed for almost six months and all I had was a laptop. So I started playing Massively Multiplayer Role Playing Games and became really interested in virtual environments and how hanging out in Star Wars galaxies made me feel like I wasn’t stuck at home. I actually felt like I had been out of the house. I started doing a bit of research after my kids were born. When I went back to graduate school and got really interested, I was teaching a course for Ball State

“Strangely enough, I became interested in virtual worlds when I was pregnant with triplets.”



that was second semester freshman composition, which most people are familiar with. When I started teaching it in Second Life, we really started to have fun and things really took off. I just noticed there was a huge difference in the face-to-face classroom, in the traditional learning management systems that we were using, and this virtual world.

About the time that I started doing that, there were a couple dozen educators in Second Life that I knew of, anyway, at that point, but it still was a pretty small community. It was crazy enough that within a few months there were major news organizations covering it because what we were doing was pretty nuts to the outside world. Of course now there's some forty-seven hundred educators just on the Second Life Education mailing list, never mind how many thousands are in Second Life itself. So as a community of educators, it's just grown exponentially. One of the things that amazes

me most about Second Life is the way that community of practice has developed.

The community of practice started with a few people who blogged and then there was the mailing list that was started by Pathfinder Linden. There were twenty or thirty people there. Linden Labs had this Second Life Education space on one of the main continents. It was a small space but there was a sandbox there, which was before most of us had convinced the university to buy an island. The sandbox became this communal space for a lot of educators and it was small, maybe an 800 meter space. It was really small. We kind of all hung out there. That is how we got to know each other and Daniel Livingstone in that sandbox. That was kind of the origin of it all. Then there were other technologies that sort of took off and facilitated that community. There was the mailing list, for sure, but lots of blogs popped up and then there were some spaces in Second Life that were bigger and more community, with more people sort of hopping in. Then of course there started being some major tracks at some of the education conferences dedicated to Second Life or virtual worlds, and certainly the Second Life Educators Conference contributed a lot to the formation of that community.

The SLED Blog

The SLED blog was organized by Linden Lab. Claudia Linden approached me and asked me if I would be interested in running this space, which was kind of dual purpose in the beginning. First of all, the SLED mailing list had become quite large and there were lots of people who were new to Second Life education who wanted to see some examples. They wanted to know how it worked but they were overwhelmed by that mailing list, because it is literally hundreds of messages a day. It was overwhelming. One of the initial ideas



was to start a blog that would be a resource for people who were fairly new to Second Life education. Claudia asked me if I would basically organize it, not be the sole contributor but to organize it.

“Within a few months there were major news organizations covering it because what we were doing was pretty nuts to the outside world.”

It has been about seven months now, almost eight months, and we have about a dozen contributors. We publish stories from everywhere, from new campus openings to cinema pieces that are put out by education projects. We welcome new contributors but I love what RezEd does. It creates this community and there're lots of discussion and infinity groups based within RezEd.

Virtual Platforms' Impact on Learning

I think on one level it's provided a community for educators that was not there before. Just in the first few months that I was in Second Life, I was already collaborating with astrophysicists, with elementary school teachers and Ivy League professors -- people I never would have had any contact with otherwise. We are sharing ideas, co-teaching classes and writing research papers together. That kind of stuff just did not happen before Second Life was around. It changes the way educators do their job.

I think it also has pushed pedagogy forward quite a bit because you will hear a lot about people preaching about: "Don't be the sage on the stage, be the guide on the side." This whole idea of a lecture model, especially in higher education, is really dead. It's really ineffective with Generation Y millennium students because they are used to being participants. I think Second Life has given us a space that forced us to learn to teach that way because you just can't lecture in Second Life effectively. You really have to do hands on learning. All of a sudden you've got thousands of educators from all kinds of different universities, and K-12 campuses, and even corporate trainers getting together and saying, "I need to learn how to engage my students as an audience in a different way and to put more power in their hands." The Second Life environment forces you to sort of adapt to that kind of pedagogy.

Examples of Using Virtual Worlds for Education

One example that I like is Beth Ritter-Guth. She teaches at a community college up in the New England area. She is teaching literature and, I've done this too, you teach Dante's Inferno year after year and the students read it. They struggle with the language and they don't get it. They are like, "OK, so some boring old white guy wrote this book. Whatever. Let us out. It's a poem. Why is it so long and everything?" So what she did was have her students read it but they were also building the inferno in Second Life.

When you read you get mental images in your head about what you think a setting looks like, what you think a character looks like. You often don't get to compare that with somebody else's experience reading the same piece, but here are these students building the scenery and the characters on a set of this poem -- together. All of a sudden they are talking about deeper issues about, "Well what do you think he meant by that? What's this symbol for?" and "Where is this in the allegory?" Other students then get to come along later and experience the space that has been created by these students. That kind of hands on instructive learning experience is what Second Life is so good at.

“Second Life changes the way educators do their job.”

You also see great examples of role playing exercises and simulation exercises that just simply are not possible in the real world. We either cannot afford to create them, or they are too risky, too dangerous on a campus. I cannot do a fire fighting simulation with students on campus without investing a considerable amount of money. In Second Life however, it is really easy to do and you can involve more people. I don't know if you've seen it yet, but Ken Hudson up in Toronto, one of the projects he was working on with his university, was a border crossing simulation. They got students in classes who were learning to be border crossing officers, safety officers. Putting them in the booths with the real officers at the border is kind of dangerous and risky, and they really are not allowed to do it. They had trouble acclimating these students to what that situation really was going to be like. So they built a border crossing in Second Life and some of the students play the

border crossing officers, and the other ones drive cars through it, and try to hide things. They learn from both sides what that situation is like. It's just fascinating.

Challenges for Virtual Worlds

Hardware is certainly a huge issue. Just access. I'm hoping that in the next couple of years that will come down. You know we are seeing more virtual spaces that are browser-based that don't involve big software downloads or fancy video cards, or things like Hello Kitty Online, and other social virtual worlds. So hopefully that will be overcome. There is certainly a steep learning curve. It's not as easy as learning an instant messaging program, but it has so much more capability. It has so much more possibility. Learning Second Life, for example, is like learning a suite of tools. You know you don't have to learn them all at once. I think that's part of the obstacles that we run into as educators: we want to teach our subject material. We don't want to teach Second Life or we don't want to teach software. We want to teach English, or math, or whatever. Hopefully these spaces will become simpler to learn and easier to use.

Virtual World Trends

Well, certainly the demographic has changed. When I started exploring virtual worlds, the stereotype was it was the eighteen-nineteen, anti-social guy living in his parent's basement who didn't have a date and hung out in virtual worlds. We know the Second Life average user is well over thirty years old. I mean this is not a World of Warcraft demographic. It's much different. Then of course, we have this new millennial generation coming up and even beyond them where girls are experiencing virtual worlds before boys. We have this new move towards social virtual worlds that don't have game mechanics in them. It's not that you have to fight an Ork as soon as you login. You can just make a friend or walk around or change your clothes.


This kind of shift from a virtual world as necessarily an escape to a communication tool, really makes me excited because I think there are tons of possibilities there and it's really going to break some of the negative stereotypes about you know, "If you hang out in the virtual world you must not have a real life." "I can't have Second Life because I have too much of a first life." You watch a lot of TV, I bet, though. So those kinds of things I see as exciting.

“Part of the obstacles that we run into as educators is that we want to teach our subject material, not software.”

The only thing that I think I'm worried about is we're still seeing the kind of uncritical adoption of this kind of technology. I don't think educators are particularly guilty of this, but corporations certainly are, where it's bright and shiny and new. It is getting some press coverage so they think it's the right thing to do and so they jump on, and they don't do their research. They don't do the proper ground-work in order to do it well and so they end up creating something that really flops. Then all this negative process is created about, for example, "You can't make money in Second Life." Well nobody said you could. You thought you could. You did not do your research and so you came in and built this huge presence and you did not make any return on your investment. Well that's not Second Life's fault. It's your fault because you didn't do it right. I am hoping that we will see more critical adoption. Educators certainly have a big role to play in that because I think we set some of the best examples of how to use these spaces for constructive purposes.

Future in Education

I think that virtual worlds have a future especially in higher education, because students are becoming a bit more migratory, they do not necessarily start and finish their degree at the same university, or at the same place. A lot of students are starting as distance learners and then moving to campus, or vice versa. Virtual worlds, especially as kind of campus centers, as community spaces for students, are going to be very powerful. They are going to provide a sense of co-presence that distance learners don't always get in the chat room, or some sort of threaded discussion board.

Outside of that, I think what we as educators are facing is that this generation of students that are coming up don't think anything about being in a virtual world. It's not a big deal. It is going to be much more commonplace, which means we have to step it up a bit and be ready to do really good teaching in these spaces, not just treat them as novelties, which I think we do. 

"A Natural Tie-in" - Using Virtual Worlds to Educate Incarcerated Youth



Kelly Czarnecki, a Technology Education Librarian at Imagi-nOn, discusses her project working with incarcerated youth using virtual worlds. This interview was originally a co-production with the Young Adults Library Services Association (YALSA).

Podcasted on October 20, 2008.

<http://tinyurl.com/RezEd-org-18>

Libraries and Incarcerated Youth

I'm Kelly Czarnecki and I'm a Technology Education Librarian at ImaginOn, which is located in North Carolina. I primarily work with teenagers at my facility, which includes outreach at various places such as the jail facility. Doing research at the jail, as part of my job, isn't unusual. Many libraries across the country are actually involved in doing a similar thing. There is a lot of support from YALSA, as well, in terms of the Great Stories Club, which is a contest that gives books to librarians to give to jails, and at YALSA conferences there's usually a session on doing outreach at jails.



I was primarily involved in having a book club at the jail, which is a fairly normal activity. Most libraries are able to do that at jails. They either bring books from the public library to the jail and discuss them, or the jail might have funding to purchase their own books. My interest is more in technology than print material, so in the past couple of years I've been leaning more towards doing activities that involve playing

video games at the jail, using a video camera at the jail, just teaching them skills that I feel we would teach any teenager that would come into my library; or let them interact with and basically create a place at the jail library so that they are aware of another organization they can come to when they hopefully get out of jail, meaning my library. They can come here. They can take part in some of the resources they might have found out about when they were in jail, at the library.

Working with Virtual Worlds

Since about 2006, I've been working in virtual worlds, primarily Teen Second Life (TSL), but I have done other work in a few other virtual worlds as well. When I say that I've worked in TSL mostly I mean, for example, my library owns what's called an island in Teen Second Life. This is a space where we are able to conduct programs and other events that tie into our library services, such as we might have an author that comes on the island and talks about things.

Technology projects with the jail and my own work with virtual worlds: it just felt like a natural tie-in -- that this would be the next step, to introduce virtual worlds to incarcerated youth. Why can't they have access to this virtual world? I knew the safety features of Second Life. I knew that it wasn't just a wide-open space; anything can happen kind of thing. I knew there were controls that could be put into place that could create a safe environment for those in the jail, as well as those that aren't in jail that would be accessing this program.

Working with Incarcerated Youth

I'm very familiar with what Global Kids does in Teen Second Life and I saw that they had a certain project going on where I thought the teens at the jail might benefit from and I really wanted to explore those possibilities and see what that might mean; what it might take to get to that point. We basically presented to the case managers and then the librarian there presented to the chief and other higher ups. They really felt it was a program to really benefit the guys -- to be able to make a difference in their community. So I didn't face a lot of resistance from that part of it.

“Doing research at the jail, as part of my job, isn't unusual.”

One of the challenges I do have, though, is I see this project as being so much more than interacting in the virtual world. We blog, for example, about our experiences, and trying to get the time to access the Internet to do that, but I see that as so integral to the project itself. The guys of course can't access the Internet without supervision, so I would say time is one of the biggest challenges in getting them to be able to do that.

Another challenge I see is the kind of transient nature of their situation. Sometimes they might be there one week and then the next week because of various circumstances they won't be there. That can be difficult in terms of trying to keep everyone on the same page and to really build a project to what we hope it would be. I would say those are probably the two main challenges so far.

The D.I.D.I. Initiative

The Dream It. Do It. Initiative is a partnership with Ashoka's Youth Venture and Global Kids. Ashoka's Youth Venture has been doing this work for ten years across the US -- across schools in the US -- and across the world, actually, in 14 countries. For the first time, they decided they wanted to bring this to a virtual world and take those lessons they learned across those 14 countries to see what was possible. This is where Global Kids came in. These ventures are any kind of informal group, business or organization that hadn't existed prior where these young people are measuring their success -- not in terms of how a business would measure their success, that would be maybe monetary success, but rather their benefit in their community and how they are able to bring about change.

Initially we give them one session that takes about an hour to get familiar with the basic skills of the environment: to get familiar with the environment itself, to learn how to walk, communicate, such as text, chat, basically to learn all those skills and to play around. We give them that time to change their appearance and to feel comfortable with how they look.

After that, we focus on what their interests are and what issues they see in their community that they want to make a difference with. Then we pair those together in terms of how they see themselves able to make a difference with the issues in their communities, but also are of interest to themselves. For example, many of the guys seem to be interested in playing basketball or any kind of athletic sport, as well as identifying issues of drug abuse and violence and vandalism as being issues in their community that they want to tackle. Another

“Another challenge I see is the kind of transient nature of their situation.”

example is younger kids not having important things to do in their community, not having after-school activities like that and, so you know, trying to develop a kind of a venture or project out of those interests and issues, and putting those together to be able to create an exchange in their community.

It is funny because the guys are asking us all the time to define what a venture is, which is something that is youth driven. This means I could have all the ideas in the world about what I think should be changed in the community but it's not up to me. I'm not the youth. I am not the one driving this project. The venture also has to be something that's sustainable, meaning we want these guys to be able to continue this project, maybe when they get out of jail or maybe when another group comes in. We want this to be something that isn't just a one-day event.

I did a blog post on HolyMeatballs.org today, which is the website for Global Kids, about how I've noticed the guys' conversations around their spelling when they are IMing each other or when they are chatting with each other in Second Life. There is such focus on that with each other and I don't think I would find that if they had to write a paper about a book they read in their book club or something. It just becomes much more of a public representation of themselves that you just don't get those skills from any other way of communicating. ☺

A High School Class Using Second Life to Teach Science



Tracy Rebe, Assistant Principal of High School for Global Citizenship, in Brooklyn, New York, discusses her Science in Second Life class developed by Global Kids.

Podcasted on June 16, 2008.

<http://tinyurl.com/RezEd-org-6>

The Origins

We started the Science in Second Life program this spring semester, in 2008. I was approached by Barry Joseph from Global Kids who had received a grant through Motorola and they had decided to do this program that would look at bringing Second Life into a high school curriculum.

Barry came to me because as an assistant principal I only teach one period, so I have a little extra time that I can spend on the actual curriculum side of it. I am also a science teacher. Barry asked me, "Do you think we can do this? What would this look like? You know, we're the high school for global citizenship. How can we tie in the themes of the school and technology?" It just made perfect sense.

With technology being a big goal for the school, getting kids exposed to technology from an early age, getting the kids sort of excited about technology and learning to use different technology skills, as well as incorporating the issues of science and sustainability to make that a little bit more real to the students -- it just made perfect sense for us as we were looking to do this one day.

The Science in Second Life program

It incorporates the students learning basic things, starting with their blogging every morning before they start. They reflect a lot on what they're learning, even before they get into Second Life. They are using Second Life to simulate some of the bigger issues that deal with sustainability that we're learning about. For example, there's a unit on the trash problem in

Naples; rather than learning about it out of context, students are looking at it in Second Life where the curriculum developers have created a virtual Naples. The students are seeing the trash and they are seeing and speaking to people in Naples that are explaining the problem to them. They are getting a real, personal sense of what the issue is as opposed to sort of learning it in a much more two-dimensional way. That is just one example.

They are learning other issues related to sustainability. They are learning about fossil fuels by going through a virtual coalmine. They are learning about oil drilling through Second Life and Google Earth; they looked at Alaska and were able to go into Second Life and look at the oil fields and see some of the environmental effects. It was a lot of freedom for them to explore their own interests, apply them and teach each other about them in Second Life.

We started in February of this year and we meet five days a week. We are wrapping up and actually the last day will be this Friday, in June.

Student Response to the Class

When the students first heard about it, before they started, they were sort of confused. They don't think of learning as something fun. They think of things like Second Life as fun -- it's a game, it's separate from school. Yet they would be able to play in class everyday, creating something, developing things and learning things in that way. They didn't know what there would be. They didn't know how that would play out.

But I didn't have that big of a problem. It took a lot of conferencing. I had to convince the Principal that this was something that we wanted to do. He was supportive of it because I was supportive of it, but was not necessarily a believer. It took him a little while to catch on to the idea that you are really learning and that you are accomplishing real learning standards and real learning goals. You are doing it through this vehicle.

“The program was just an instant success for the kids.”



Above, celebrating Science in Teen Second Life.

Measuring Goals and Standards

I would say definitely that assessment is one of the more difficult tasks because the course allows so much freedom for students to explore on their own and learn things that you don't necessarily expect them to. They sometimes go off on their own ways. The key units are basically built around the old learning standards that we have created. Then with every unit there is a hands-on Second Life project in which students are demonstrating their learning based on those key skills. There is a lot of stuff, so I'm able to measure and get a really good sense of the ways students fall in terms of mastering some of the major objectives for the course. I am not necessarily getting the other learning that goes on, which I think is true in any class. There are so many other things going on, there are so many other immeasurable opportunities, experiences and

“ I have just learned an enormous amount about how powerful this is as an instructional tool. ”

interactions that you don't get. It is pretty clear to me, at least with the stuff that I am seeing and that I am measuring in a more concrete way, that students are definitely getting this in a way I don't think they would in a regular class.

Obstacles to the Program

There are a number of challenges, I think, at this point. I am not a Second Life expert, but I have had a huge amount of support. I have had a team teacher in the room in Second Life with me everyday who provides a lot of technical support to me and to the students as well. I know it would be a much, much tougher challenge to do this without that. I don't know how sustainable the program would be when expanding it into other schools. I am learning, but I am definitely not an expert. I don't know how to put out the simulations, create them, print them, troubleshoot them, things like that. I think that is definitely a challenge. Technology is a challenge. We have very little technology.

We are using twenty laptops right now that were provided to us by the Motorola grant, but without that I'm not sure that a lot of schools like ours would have the resources to

actually do something like this. I think it would definitely be a challenge. The laptops we do have did not have the graphics card that we needed. We are doing it on a wireless internet network and that often creates problems with lag, which can be really frustrating for the students. So there are definitely technical challenges.

Outcomes of the Science through Second Life Program

The program was just an instant success for the kids. I have always used the example of a couple of male students at the school who were not necessarily fully engaged in school, always struggled, were in trouble a lot, and were suspended a lot. My class is at 8:30 in the morning and attendance is often a problem for classes starting that early, but I have almost all my students in there everyday. When given the opportunity to stay after school, I have had almost my entire class after

“He was suspended for three days yet came to class in Second Life every day that he was suspended.”

school every day. Well, not every day, but every opportunity that they get to come in and continue working.


I have one of the students in mind particularly. He was suspended for three days, yet came to class in Second Life every day that he was suspended. There is just such a high level of interest and high level of engagement there among students who you wouldn't necessarily expect it from, but who are very comfortable with the technology. Even for me, though I am fairly comfortable with technology, so many of my students are more comfortable with Second Life than I am and just are able to do so much more than I am. I think that is very motivating for them. I think they feel really empowered because it is their own. I think that is an incredibly powerful and motivating tool.

Advice for Teachers

The teacher needs to be really interested in the program and very comfortable with allowing students freedom. I think that a lot of us teach in a way that is very structured and very rigid and while there are elements of that in this, it is also incred-

ible to see what the students will do when given the freedom to go in their own direction, to go their own way. Teachers need to be comfortable without knowing how to do everything, trust that their students are actually working and engaged, even if they are doing something a little different from what they are being asked to do originally, and sort of just let students show you what they know.

Using Second Life Curriculum in the Future

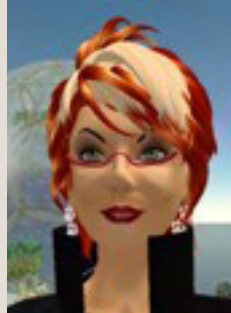
I think we are very interested in using Second Life curriculum in the future. I would not jump into it. I think it is going to take some time to iron out some of the challenges, in terms of technology. I have just learned an enormous amount about how powerful this is as an instructional tool and I definitely could see it working really well in the mass curriculum. I can see the students who are not typically engaged in math getting very engaged in sort of learning that through Second Life. It opens up a lot of possibilities and a lot of opportunities to teach students in different ways and teach them skills that they are going to need to be competitive in the workforce in some stage of their lives. I would also want to make sure it is done really well. We are putting a lot of time into this science curriculum. I think we need to put more time into the science curriculum and eventually sort of expand that into other areas. 

"The Great Leveler" - Second Life in Middle Schools

Peggy Sheehy, information specialist facilitating the Ramapo Islands Project in Teen Second Life, discusses bringing the first middle school with over 300 students into Second Life.

Podcasted on May 19, 2008.

<http://tinyurl.com/RezEd-org-3>



First Steps

I have a daughter, Meghan, who is currently an employee at Global Kids, but at one time, she was at Linden Lab and she was a liaison to the Teen Grid. Meghan tried for over a year to get me interested in Second Life. At the time, although I was passionate about technology and education, I really didn't know anything about gaming, virtual worlds, or multi-user virtual environments. I really just kept putting off taking the time to investigate it.

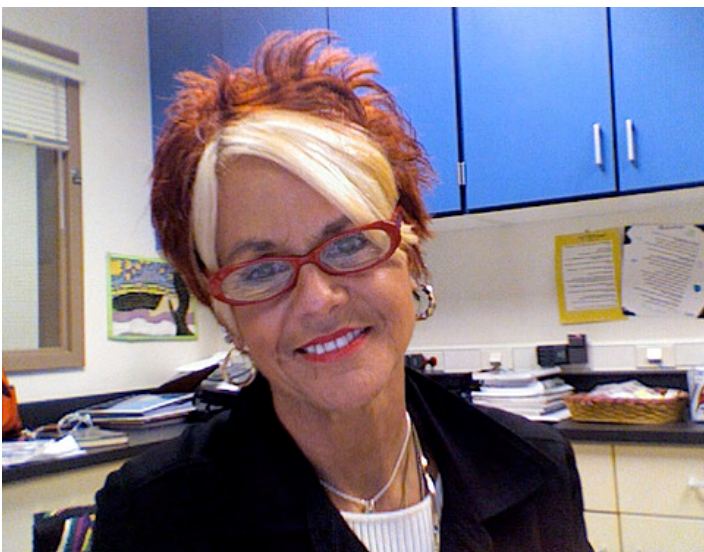
Once I did, after about three hours, I just knew that this was something huge for kids in education. So, thanks to Meghan's introductions to the right people on the main grid, I met a lot of educators and I started formulating a proposal, which took me about a year. At that time, which was two and a half

years ago, there really wasn't a lot of research or data available to support moving education into a virtual environment, so it was quite a struggle to find the resources to be able to present my proposal that substantiated what I wanted to do.

Convincing the Superintendent

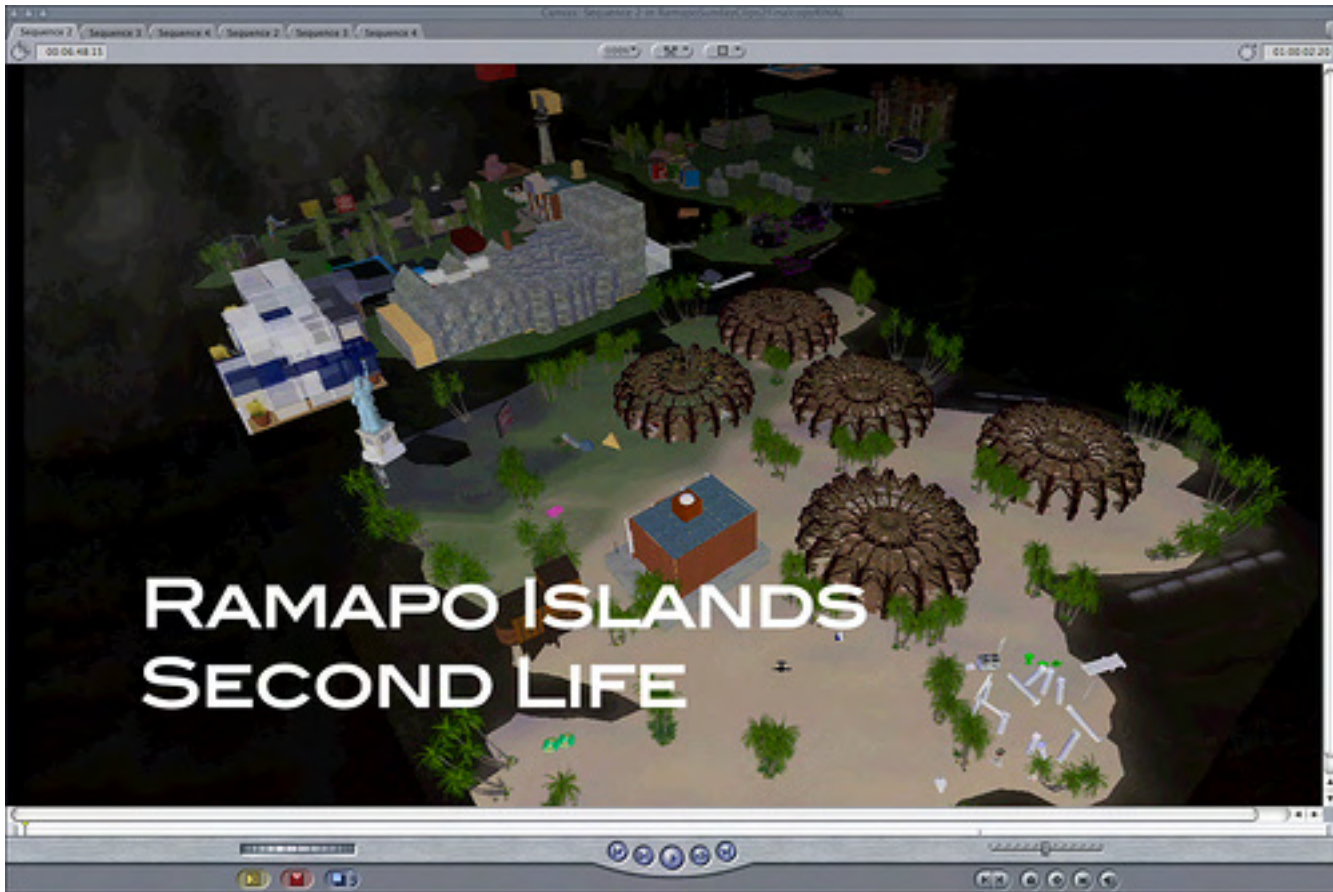
I developed a proposal and presented it to the powers that be. My district, my superintendent, Dr. Robert, is a very visionary man, so I wouldn't say that my hurdles were extremely high. I presented some of the educational values that I was getting from those on the main grid who were involved in higher education and then kind of translated it into the curriculum for the Middle School. At the end of my presentation, one of the questions he asked was: "Well you showed me how this might be educationally sound and that they could support pedagogy in a sound way, but tell me how our kids are going to be safe? I want to know that our kids are safe." I once again reiterated the difference between the teen grid and the main grid. The teen grid only allows thirteen to seventeen year-olds, with adults not allowed in without a fairly extensive background check and, even then, they need to be associated with and locked down to the education presence that they are working on.

“I'll never forget the day the islands were up. I logged in, landed on the islands and felt like Columbus.”



But he still wanted to talk to someone. He said, "You know, I just want to talk with someone who has done one already. Maybe a principal." And I explained to him, "Dr. Robert, no one has ever done this. We would be the first school." At this point, a little bell went off in my head and I said, "However, there is an organization on the teen grid called Global Kids and they're working with high school kids in many different capacities. I know they have an after-school program, and they have an in-world program." And he said, "Alright. I want to talk to them."

I cold-called Barry Joseph at Global Kids and introduced myself. I told him what I wanted to do and he was very excited that the school was coming in; you could hear the excitement building between us. I was very excited that I was talking to someone already in there and doing it. We hit that point and



I said, “Well Barry, my superintendent wants to know if you have had any difficulties with parental complaints or there being any bad feedback from the community about the kids in there?” Barry kind of paused, and very quietly said, “No, we haven’t had any complaints of that nature. But I honestly don’t know that with our population the parents are that involved in what the kids are doing online.” I thought maybe I shot myself in the foot. I then said, “Is it truthful to say, Barry, that there has been no parental complaints?” He said, “Yes, that’s the truth.” I reported that back to my superintendent and he said, “You know what, just go ahead. Just go ahead and try it.” So off we went.

I had three or four hundred fourth graders. I asked for three sims, thinking I might get two, but I got all three. I’ll never forget the day that I got the email from Linden Labs that the islands were up. I logged in, landed on the islands and felt like Columbus. There it was, this vast extent of uncharted territory, undeveloped land, no buildings, no anything. That’s when I turned to the Second Life community and I said, “We are the first middle school, I need your help. I need volunteers. I need

builders, I need scripters.” The community in the main grid stepped up to the plate. I had about 75 volunteers help me build Ramapo Island. Fred from Firesaber Consulting moved the island to the teen grid with the help of Linden Labs. So that’s how we got rolling.

Gaining Teacher and Student Buy-in

Teacher buy-in was actually not as difficult as I thought it would be. It took me a year to develop that proposal and during that time one of the laptops on my desk always had Second Life opened. I always had some kind of setting that was fascinating to look at, so when teachers would file in and out of my office for different reasons whether it was, “Can you help me find some resources on global warming,” or “I need ink for my printer,” they would glance over at my laptop and I naturally had my avatar on the screen, which resembles me in real life. They were fascinated: “What is that?” That is when I would jump on the opportunity to say, “What are you doing in your classroom right now?” Whatever they were doing, whether it be a unit on immigration, or geometry, or

just finished reading *Of Mice and Men*, I would say, “What if we could...” -- and try to pull out an example of something that would support that curriculum that could be done in the virtual world. That is how I generated interest.

I had a good idea of which teachers to approach once the islands were up. We would sit down with their curriculum and say, “We can do this the same way we do any other project. What do you want your kids to know or be able to do at the end of this project; and how would the virtual world support that?” We started using Second Life.

We told the students, “We’re learning here too, and so help us.”

One of the best resources we had was asking the students. How does this go, how could this be better. We didn’t want to just go in there and recreate real world experiences; we wanted to utilize the virtual site format as much as we could. Quite a few starting projects that we did were really transferring something that could possibly happen in the real world into the virtual world, knowing that the kids were just learning additional technology skills in the process.

We expected them to be a bit more engaged and we expected them to be excited about the projects, but we never anticipated the degree of engagement and the degree of participation that we got. It’s been basically a series of one teacher telling another teacher telling another teacher, and the kids getting into a class and saying, “Well, when are we going to use Second Life?” and other teachers coming to me and saying, “You know, I have to learn about this Second Life thing. What is it? My kids are all talking about it.” It really has been a self-sustaining on-going project because of the interest and the success that has transpired.

Second Life’s Impact on Youth

People want to see data and the research. Right now, what I have for them is a large base of anecdotal responses: a lot of project evidence. I am very glad to have quite a few people involved in their doctoral work, who are hopping onto Ramapo Island and collecting the data for me now. I have said to teachers afterwards, “Did you write up for me your responses to what was good and what wasn’t good.”

Time after time after time, I hear from these teachers that this is the great leveler. This is where my kids all start at the same

point. Everyone participates. It’s not like a generic classroom where you have five people up front waving their hands at every question, and the five people in back who are just not interested and don’t want to be there, and then the middle group who play school and just do enough to get by. All of a sudden, the non-participatory students are participating. They are writing and they are reading. That’s the core subject in there, the literacy that is so evident. That fundamental traditional literacy is there.

Now we are getting into all the ICT literacy, the thinking skills, and the critical thinking and communication skills. What are the life skills that are happening? They are learning leadership ethics, accountability and personal and social responsibility. It’s the perfect setting for that. My vision is that somewhere down the road we can expand this to have that global awareness. We all tout twenty-first century literacy, and for me, the foundation of twenty-first century learning is the global collaborative piece. These kids need to understand the financial, economic and business entrepreneurship of global awareness to specific literacy. It can relate to things from health to wellness, being aware of needs. This is a global world and we can’t keep cloistering them in our own little districts, and our own little counties, even our own little states. We really have to expand that world if we’re going to teach the whole student.

“It really has been a self-sustaining on-going project because of the interest and the success that has transpired.”

Advice to other Educators

There will be resistance: “I’ve heard that it’s a game,” “I heard there’s a lot of x-rated content,” “I saw that on ‘CSI New York’ and it’s not some place I want my kid to be.” So you need to be armed to counter all the bad press with all the positive things that go on in Second Life. The fact that NASA, NOVA, the American Library Association and Global Kids all are in Second Life. I use that as an example all the time. Have examples of things you can do in a virtual platform at hand, for example have a math lesson or have a science lesson.

The other thing is to make sure you have the hardware and your network can run Second Life. You want to make sure

you can truly support the platform so you don't do all this work and then find out that the platform does not run well, it's too laggy or the system is crashing. With our kids being twenty-first century learners, the worst thing you can do is put them in front of something that is not working, because their level of frustration will rise. They will expect it to work, to go quickly and to be instant gratification. When they can't move at the speed that they are used to outside of school when playing around in World of Warcraft, or one of their other games, if they can't get that same instant response, you will see the level of frustration is pretty intense.

A Future for Learning

I have a very tangible vision. I would like to see the multiple uses of virtual environments join together, develop a consortium of educators to share their concerns, to share that same protocol and develop a curriculum, a curriculum pertinent to all students, regardless of their economic standing, regardless of where they are in the world, regardless of their cultural background. Maybe your eighth grade class has their global curriculum month, where they spend time with someone from Beijing, Sydney and London exchanging culture, issues about human rights, and they learn about each other's traditions and economics, and their civics, and their government systems.

I envision two things will happen here. Their global awareness will expand, but also their global awareness will contract, in a sense that they will face how vastly different the world is and how much it is the same. They will start to pull upon those universal themes, the themes that are intrinsic to the human tradition. ☺

"This is the Genius" - Developing Tools to Harness Virtual Worlds for Learning



Jeremy Kemp, an instructional designer at San Jose State University, talks to us about the development of the classroom management tool for Second Life Educators: Sloodle.

Podcasted on June 30, 2008.

<http://tinyurl.com/RezEd-org-7>

Background on Jeremy Kemp

I've been doing distance education since 1999 -- traditional web-based, where a group of people go into a web-based classroom, read materials, participate in the threaded messages boards and take exams. It is distance education. About the same time, in 1997- 1998, I saw a game called Myth - The Fallen Lord by Bungie, who are the people that do Halo. I'm not much of a game player, but I had a friend who was really into it and I did their web work, so I did a web-based community. I actually coded in Perl -- the Perl permanent language. I coded a blogging tool, so that members could come to this dynamic website and post information about their game activities.

On the one hand, I was teaching people with old school tools, web content management system tools, and on the other hand, when I came home I was working with communities doing this blogging and gaming. That was really interesting



Blog



Wiki



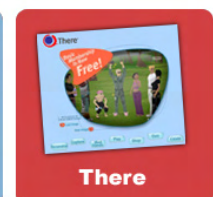
Forum



Machinima



SecondLife



There

and had a big impact on me. That really is how I got involved in web publishing, to support online communities of people doing synchronous gaming. That was really interesting. Then, I went to Stanford and got a masters degree in Instructional Design and started working here at University State about six years ago. I'm the Assistant Director of the Second Life Campus here at San Jose State School of Library and Information Science.

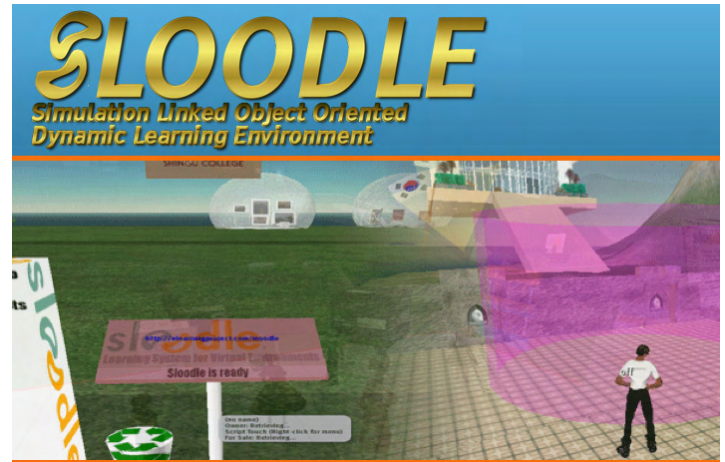
This History of SLoodle

I was playing in Second Life on my own time, feeling kind of guilty about that, so I was really looking for an opportunity to put my play stuff to work. I wanted to know, because I've been supporting people using learning management systems, could we take this 3D front end -- this interface -- and plug it into a learning management system. In that sense, I was combining work and play, and so I played around a little bit with the web connectivity of Second Life and really saw that it was possible to do this. [In] October of '96, I staged an exhibition that demoed some of the things that could happen with a learning management system that was connected to Second Life, and a lot of people got very interested. It caused a lot of buzz.

Right about that time, I hooked up with Daniel Livingstone at Paisley University in Scotland, who was a computer science professor. We wrote the original white paper for that project, to ask how can we teach, how can we do distance learning in Second Life; and if we're going to do that, how are we going to connect it with people who are already using distance learning tools? Really, the natural progression, the natural flow, was to move Second Life as a 3D interface with avatars and learning management systems to do the sort of more reflective learning where people could come and write long pieces and do threaded messages in this environment.

SLoodle

SLoodle's name came from combining SL and Moodle. The backend is Moodle, the open source learning management system platform, and it allows people to create custom modules. It is a benefit in the sense that you don't have to come and reinvent the wheel. A lot of people who are coming into Second Life to teach are extreme early adopters and they are comfortable scripting objects, putting up display boards and working with students, but that is just the tip of the iceberg. We think virtual environments are a much larger and wider



thing, staying on the horizon for distance education. We would like to see an easy flow-through from people who are already familiar with teaching, to learning management systems to use that as sort of a scaffold -- a crutch, a structure to move their teaching into these virtual environments. That would hopefully make life easier for them in Second Life and also allow them to do things that they couldn't do in Second Life, like reflective long writing and community-based reflective things in the Moodle operating system.

People just sign up on our websites -- over 3000. Then we had a SLoodle moot. The Moodle community has these Moodle moots -- we have them in England and in Canada -- basically user community meetings, and so we modeled the mini-user community meeting called SLoodle moots. For this particular SLoodle moot, we had a couple dozen educators and presenters come in and show us some of the stuff they've done. Hardcore adoptions I think are still wrapping up.

I think the tools honestly are just a little rough right now to install -- you have to have your own Moodle server, you have to install scripts and servers in Second Life. I would always like it to be a little easier to use, but I think it's a little bit on the difficult side now. I think a tipping point here is going to be when we get to a point where it's easier to teach Second Life with SLoodle than without. We are not quite there yet. We are at version .3, so we're not at a full release version.

“A lot of people who are coming into Second Life to teach are extreme early adopters”

Peter Bloomfield, who is a coder in Scotland, is doing just amazing work, a lot of it around the authentication. When you go into Second Life and you have an avatar, how does Moodle know that the avatar it is interacting with is the same as Joe Smith's student? A lot of authentication stuff coming out and also making the modules easier to control from the Moodle side as well.

Text Messaging Project

Barry Joseph, from Global Kids, came to us and asked us if we could connect former child soldiers in Africa with his teens, which is pretty wild. This was a brilliant initiative. The thing is that child soldiers in Africa don't have broadband computing power, like Barry Joseph's teens do in New York City. So we were asked to open up a portal between someone with a cell phone, and someone with access to Second Life and the web. We created an international sms portal, for use by those two populations. I think it's going to be interesting and I think it's a testament to the flexibility of Moodle itself, to be able to work with those sms gateways. The majority of that work was done by Daniel Livingstone at Paisley University; he did the entire project.

SimTeach

SimTeach was one of the original portals for this sort of mass, customizable virtual world as a learning tool. It was the first wiki -- the first place where the community really got together in Second Life -- educators [and the] community started developing resources within themselves. If you go to SimTeach.com and plug into that wiki, the official Second Life wiki for now, you will see a list of all of the educational organizations that have a presence in Second Life. You will also see a large set of scripts, Second Life Linden scripting language scripts, and some other stuff like that, that come are matching the utility of that site for now. It's pretty helpful.



Possibilities of Immersive Worlds

You only need to look at the amount of addiction, enthusiasm and motivation that happens with a platform like World of Warcraft, which has a much higher quality of content and a much easier interface, that is a multimillion-dollar develop-

ment effort. You will see in the massively customizable spaces like Second Life, and eventually Wonderland and Croquet, where the quality of content, the level of content, as well as the ease of interface are going to come together and make it a very exciting place for learning. I don't think it's quite there yet. I think we're all sort of struggling to make this thing useful, but I think it's obvious to a lot of people what's on the horizon. In five or ten years, you're going to see a very solid, capable learning platform instead of a set of eco-systems (it is called a learning eco-system) where people can see their community and content in three dimensions and interact with it easily. There have been some prototypes of cameras, where you put a camera on top of your computer and wave your arms around and you can fly your avatar. There has been a lot of interface work going on. I think it's definitely going to hit a critical mass here.

It's interesting. People say, "Well, Second Life is great, but it's not THE platform," but I think it's sort of a short-sighted way to think of it, because you've got hundreds of thousands of hours of creative content in there. Maybe Second Life, the viewer, is not the one not we will be using in five years -- I can't imagine it is -- but we'll still be able to go to the Ivory Tower of Prims, or to Morocco, Virtual Morocco, and see this content. This content will still be here. To think that Second Life is not it, and some other platform is going to be it, I think that's half the story. I think we're not going to be using the viewer, but I do think we are going to be seeing the content.

Most importantly, the genius of Cory Ondrejka in creating the scripting tools for Second Life. It's the first time you've seen custom creative content interacting with avatars and the web in a very easy to script way. So these tools were possible with Active Worlds, at There.com to some degree, but not as easily. This is the genius. ☺



Voices of Parents and Youth

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"Five Tips for Parents" - Bringing Virtual Worlds into the Home



Linda Burch, co-founder and Chief Education and Strategy Officer at Common Sense Media, on the present and future role of virtual worlds in the lives of youth.

Podcasted on June 2, 2008.

<http://tinyurl.com/RezEd-org-4>

Background on Common Sense Media

Common Sense Media, founded in 2003, is a national and global not-for-profit that is all about kids and media. The centerpiece of what we do is a website where we rate and review all types of media -- from movies, video games, books, TV, websites and music -- from a youth and family perspective. We also provide trustworthy and independent parent education, tips and tools, and we reach out to educators as well. We distribute our content on our website and also through distribution partnerships with online partners such as AOL, Netflix, MSN, iVillage and screen through major cable distribution partners such as Comcast, TimeWarner, etc.



How Youth Learn in Virtual Worlds

Virtual worlds are interesting because they are a kind of nexus between social networking, gaming, and 3D graphic environments. Kids can learn a lot about self-expression and creativity. I think they tap into their sense of what they can create with their avatars. They can connect and communicate with others so they can learn things about socialization. They can exercise their desire for exploration. It really taps into a desire to explore. I think some of the sites have great educational values. There are sites in which you can learn how to be a responsible nurturer for pets. There are others

where you can learn money and financial management: how to spend money, how to acquire, how to save, how to purchase and participate in virtual economies. There are some very fine worlds in which more explicit knowledge is built in terms of science or geography, or how to participate as a responsible citizen in the world.

“ Kids can learn a lot about self-expression and creativity. ”

Five Tips for Parents and Virtual Worlds

Our focus initially is really on introducing virtual worlds and what they are to parents of children six to twelve years old, because there's been a traumatic change of online life to younger kids. The first tip is really to do your homework and go online and check out the sites before you let your kids go online. You need to make sure they are safe and to understand the parental controls. Most of these sites require parents to give permission for their kids to access them. There are controls that allow parents to set children's settings in terms of whether or not kids can chat online. They need to look into the methods for kids to flag inappropriate content and just set up some of them up. Now today, even if you can set the amount of time a child can play online, it's important for you to go online, understand what the world is, see where your kids are going to explore, what games there are going to play, et cetera, before you say okay to have your child go online. That is the first tip.

The second tip is to look at the socialization that is happening online. I think one of the great benefits of virtual worlds is that there is a social networking aspect to it; but for young kids, it's really important for parents to understand that socializing in a virtual world is not unlike socializing in a real world. Feelings can be hurt. You need to talk to your children about talking to strangers, about not providing their personal information, their names, their passwords, any of the personal information that could make them at risk. But also,

“ There's a wonderful social aspect to them but it makes it difficult sometimes to pull your ten year-old away. ”

to talk to them about what it means to reach out to another penguin or another avatar, to play and be rejected or ignored. You need to talk to them about the fact that this is a game not real life and that they should be ready to massage hurt feelings if that happens. That is really an important second point, to really understand what kind of socialization is taking place in the virtual world and make sure you talk to your kids about that.

Thirdly, you have to look, as a parent, at the elements of commercialization, advertising and materialism and make sure that you are comfortable with them. Some of these sites really do promote an inquisitive nature in terms of money. Most of them you earn virtual money by playing games and you can spend it on anything from decorating your igloo to buying clothes. Certain sites are actually sponsored by major media companies and there is pretty explicit product placement. Some of them have advertising in them. Some actually have real stores where you can buy real things. So you have to talk to your kids about money and what it means to your family. Define for your own children what it means to earn, save and spend. Explain your values.

The fourth thing is that you need to take a good look at the educational value that you see in these sites. They are not all created equal. Some really do promote learning, science and math and reading skills. Others are really much more about entertainment. Some of the sites for the older tweens have quite a bit of popular culture, celebrity-type of celebration there. Make sure you feel comfortable with that before your kids go online.

Lastly, I think there is the question about setting time limits and making sure the play online is balanced with real life -- going outside and playing. These sites are engaging. They are intended to be engaging. They are fun. There's a wonderful social aspect to them, but it makes it difficult to sometimes pull your seven year-old, or ten year-old away. So up front, when you determine that your child is going to be on these sites, you really need to have a conversation about time limits. Our recommendation is for younger children to do it in two fifteen-minute increments, because you can always add more if you want them to spend more time playing online.

Those are the five tips we typically communicate to parents of younger children. Of course, the over-arching message is to establish really good codes of conduct online as you would in any site or any space. The kids need to be taught

to be respectful to each other, to not say things to someone online, to just be good little digital citizens.

Adapting to New Visibility of Virtual Worlds

This whole field is growing so rapidly. I think there was a report that said that in 2007, 24% of American kids and teens will visit virtual worlds, and by 2011, it will be 53%. So this is really the fastest growing part of the web for kids. I think it is important that most of these sites are relatively safe, and so we are doing a good job, I think, at Common Sense Media, with each new site that comes to the floor, trying to do a review of it. We rate and review all of them to really let parents know what are in these worlds, how can their kids be safe, what can they learn.

We also know that it's largely girls that make up the audience, greater than 50% for these virtual worlds for younger kids, and that is really an exciting development because it's bringing girls into the internet in an interesting way. It's also something that we need to understand and make sure that the role models that are being presented in these virtual worlds are really healthy ones for girls. We are finding it exciting and actually hoping to encourage all the creators of these virtual worlds to continue to improve the sites and make sure there is true educational value in each of them.

The Role of Digital Media in Kids' Lives Report

CSM recently completed a survey on the role of digital media in kids' lives. We found that three out of four parents in the survey agreed that knowing how to use digital media is beneficial to kids as traditional skills, like reading and math. 83% of those parents said that digital media gives their kids the skills they need in the twenty-first century. They express skepticism however, about the value of digital media platforms like virtual worlds, to teach kids how to communicate and collaborate, and to connect with others, which is really what I think many people in the educational community believe will ultimately be the value of them. So I think what it says to us, is that there is a lot of education to be done

“ Kids need to be taught to be respectful to each other, to not say things to someone online, to just be good little digital citizens. ”

with parents; that some of the sites that are the leaders in providing rich learning environments need to be promoted more actively, they need to become more visible to parents in this world. Parents are taking most of their views on virtual worlds from what they perceive as being an entertainment application as opposed to an educational one.

Teachers had more of a positive view around believing that digital media could promote this type of learning that we think of as twenty-first century skills -- for example, collaboration, global awareness, civic engagement. That is probably because it is in the educational settings that some of these new virtual worlds and games are being tested. Educators are becoming aware of them but parents are not, so to me it was really a very positive message because there is an openness to see digital media as a learning potential. There is a recognition that it is important from a critical thinking and problem-solving perspective as traditional types of learning. We have not yet gotten to the point of really raising awareness about all of the positive affects around community participation and civic engagement, but that is, I think, in part because parents are concerned about some of the safety issues that are often talked about with regard to social networking like MySpace and Facebook. I think also they are somewhat concerned about the commercialism of some of these sites.

Social Media and Common Sense Media

I think number one, Common Sense Media wants to be the "go to" place for parents and educators for updated information on all of the new virtual worlds as they surface. We want to continue to do ratings and reviews from the perspective not just about the content but how kids actually use them, to make sure that they are safe, to make sure that they are full of educational value and the message there is positive.

Number two, I think that we can raise awareness also in a consumer-oriented way, put some pressure on the industry and the creators of these worlds, to really think about kids and think about the educational potential of it.

Thirdly, I think we can connect educators and parents together and really explore what kind of learning can happen at home versus learning that can happen in more formal school settings and really, together, raise a generation of kids who are safe, smart, ethical creators and consumers in digital media. ☐

Virtual Worlds: Learning as a Family



Elizabeth Lawley, the director of the Lab for Social Computing at the Rochester Institute of Technology, and her son, Lane Lawley, an avid Second Life coder,

discuss their experiences with virtual worlds.

Podcasted on July 28, 2008.

<http://tinyurl.com/RezEd-org-11>

The Introductions

Elizabeth: This is Lane Lawley. He's a fourteen-year-old, home-schooled student in Rochester, New York. His nametag says he's a youth gamer but I don't think he's too thrilled with that as a label for him. He is an avid Second Life coder and is very interested in virtual world programming. He is also a player of many different kinds of games and a math and programming wiz.



Lane: This is Elizabeth Lawley. She's the Director of the Lab for Social Computing at the Rochester Institute of Technology [RIT] and also a web designer and information technology teacher. She is currently working on splitting off a department that will allow for the teaching of game design and different aspects of that at RIT.

Virtual Worlds and Learning

Elizabeth: Right now virtual worlds are not directly involved with the work that I do in terms of learning. I have a lot of

interest in virtual worlds, in particularly in game-based virtual worlds. As the parent of an avid virtual worlds user, I get to see a lot of examples of how virtual worlds are really useful from a learning perspective. So I have to differentiate my personal interest in virtual worlds from my professional interest in virtual worlds. The parenting versus the professor.

From a parenting standpoint, even though I have found Second Life to be nearly impenetrable for my own use, I have been really delighted with the way Lane has taken to it and the kinds of things that he has done in that environment. It's been really exciting for me to see him doing things like asking me to buy him copies of Google SketchUp so that he can do sophisticated 3D modeling on his computer, specifically based on the things that he's done in Second Life, or him wanting to go to summer camp this summer to learn Ruby On Rails because his interest in programming has been peaked with Second Life scripting language.

“My big frustration with Second Life from a parenting standpoint is I can't play with him.”

For me, I see Second Life as being a hugely positive thing for him. My big frustration with Second Life from a parenting standpoint is I can't play with him. He's segregated on a teen-only grid and I'm on a grown-ups only grid. That means he can't help me learn to use the environment better and I can't work with him on the things that he wants to do. For me that creates one of the biggest barriers and one of the biggest problems.

Second Life: Play and Learning Spaces

Lane: When I started out on Second Life, I started out on the main grid, which is where I learned most of the mechanics of Second Life, such as its building tools and scripting tools. I was on the land of a friend of my mom's and he accidentally introduced me to one of the Lindens as being Liz Lawley's son. I was subsequently ported to the teen grid and given a small folder of items that I did not create. I bought land the very first day. My parents understood that I would need land to get by. I probably would have quit if I didn't get land and have some experience on the main grid.

The need for land is pretty strong because of the way that Second Life is built: if everybody owns the land, you can't build on other people's lands. You will have to go to a public sandbox, which is kind of like saying: “learn to drive in a subway station.” I am pretty sure hundreds of people have quit the teen grid just because it's so hard and expensive to learn and experiment. Once you have land, I would say you still need to have a certain level of technical sophistication in order to learn the mechanics.

I met a few friends who were teaching me how to build, to create 3D models within the world. I built a house first thing and it was not very good. I've sold my land several times and bought more land. Since I realized I was not an extremely proficient builder, I switched more to the programming side of Second Life, the scripting side, which uses Linden descriptive language, which is similar to C or java script.

Homeschooling and Second Life

Lane: I recently changed to be legally schooled at home. After much paperwork, I was allowed to be taught by my parents and myself on the condition that I would take a standardized test every summer and score above the thirty-third percentile to remain homeschooled. Basically, as long as I pass that test, I'm allowed to do most of the things that I'm really interested in as long as it relates to the subjects I have to log hours in. For example, writing a paper about Second Life would cover something like social studies and English in one paper.

I would not call what I do “playing” because the things I do in any other environment would not be considered playing. It would be considered learning and working. The fact that it's 3D and you control a character, and you can have fun in there, does not make it a game. You can have fun with a lot of things that aren't toys.

Developing interfaces like the one I was working on a few months ago, which was called Woot, is something that I do that could be considered as “work.” Basically, Woot is an interface that allows you to put your status and profile on the web and access it again in Second Life, and have friends and everything. The products have been put on hold for now, but a lot of programming and building work would be considered 3D modeling and programming in the real world. In Second Life it's usually looked at as playing because Second Life is a game.

Homeschooling: From a Parent's Perspective

Elizabeth: It's been really wonderful for us to see the kinds of things he's doing there. The downside is that we can't be in there and see the stuff for ourselves. He's been really wonderful about showing us some of the cool things that he does and telling us about the stuff that he works on, which has been really interesting. As a technical educator, watching his understanding of really complicated computing concepts has been very exciting for me because when he started using Second Life he understood basic stuff about the web. He understood html and he had been learning java script. In fact, I'm going to tell the story about what you said when you started learning Linden's scripting language (LSL). When he started learning LSL he came to me at one point and he maybe just turned thirteen.

Lane: I was eleven when I started java scripts.

Elizabeth: Right. Not when you were in Second Life. He had just turned thirteen when he joined Second Life. He came to me at thirteen and said, "All those years I spent learning java script are really paying off now" which, coming from a thirteen year-old, was really fun to hear. It wasn't just the java script that helped him with the Linden scripting language; the project that he is talking about, the Woot project, was a huge conceptual leap because he started understanding client/server architectures.

He started understanding how you have to build interfaces to databases. He had to learn how to create a database back-ended website to store all the updates in. We had to talk about database tables and concepts of normalization. I did not usually use terms like normalization; that was what he was learning. We know this already about learning, that if you have something that you really want to do then you're going to make the effort to learn the concepts. Where if you say it's really necessary to learn the concepts because some day you'll need them, that is much less compelling. So for me it's really been great to watch him do this and to watch him form different kinds of friendships online with people who share his

“My hope is that there will be open-ended virtual world spaces with user generated content that allow all ages.”

interest, because living in a suburb of Rochester, New York, we don't find a lot of teenage coders. There just are not tons of them around. For him to have a space where he can interact and talk with other kids who share his interest has been really wonderful.

Learning within a Family-based Group

Elizabeth: I don't know if we really do talk about this level of learning as a family with other families so much. We do talk about the fact that Lane is doing a lot of interesting computer stuff, but other than when I talk with colleagues or other people that are in this field, it does not tend to come up. You know people will say to us, "Well, if he's home-schooling, how is he going to learn this and that?" And we say, "Well, he is already really interested in math and physics, and programming." We don't necessarily have to get into the details of exactly why or how. It's enough for them that I can say, "Yes, well the only book he forgot to return to the school library was one on math algorithms that had never been checked out of the library before he took it out." That tends to quiet a lot of the concern about, "Well is he just going to be playing games?" because clearly his interests are not as much about game playing as they are about exploring a lot of abstract concepts.

Lane: I would agree. However, I don't want people to think that Second Life is the only tool I use to teach myself. I use several textbooks. I use the internet and the curriculum that the State provides that allows me to pass the test. In free time, I will do independent studies of things they would like me to study but there are certain requirements that I do meet.

Using Virtual Worlds to Learn

Lane: Again, virtual worlds have sophisticated technical knowledge, but also I find that it was always harder to socially interact in the real world for me before I came to Second Life, which is easier because you know it's so much less real. I guess that I always found it really hard to talk to people I didn't know in the real world. I couldn't do it. I would stay away from them mostly and talk with my friends and not meet new people, say for the conferences I go to sometimes. But with Second Life, it's a lot easier to meet people -- also interesting people, who are the type of person that might not live in Rochester, New York and be my age, someone who might live in Greece. I would say interacting in virtual worlds

and off-line are both different and it's still a lot easier to interact on the computer.

Up until about a year ago, I played World of Warcraft, but I found it too game-oriented: goals, playing, killing, and all that, and less freedom than in Second Life. You couldn't do as much and I had to ask my mom more about Warcraft.

Elizabeth: What about Star Wars Galaxies? You played that.

Lane: I played Star Wars Galaxies for a long time, maybe a year and a half, two years. I found it more enjoyable than World of Warcraft because it also gave you more freedom, though it was also harder to play. World of Warcraft is open-ended but linear in the sense that once you get a quest, there're only a certain number of quests, and you have to do the same thing for every quest. You can do it in different ways but at the end of the day, you do the same task and there are a set number of tasks. The interaction saves it, but I would say that in Star Wars Galaxies there were many more things about making your own missions and in Second Life, it's much more than either of the two combined because there are no missions. You create everything in there.

Apart from it driving me to Second Life I would say that a big thing about War of Warcraft and Star Wars Galaxies is leadership, and I didn't get that really. I did get a sense of hierarchy, commanders and everything like that. Just like in the real world, you always have professors and bosses and things like that. Bosses in the sense of a manager, not a [...]

Elizabeth: [...] manager and not a thing you have to kill at the end. Yes.

Advice for Using Virtual Worlds as Tools

Elizabeth: I guess from my standpoint the really important thing is to just understand it. Not to just say, "Oh, that's just something the kids do" and to actually spend some time in it. Rather, it is playing with them in a MMO environment or it's asking them to show you and explain the stuff that they're doing in a space like Second Life, in lieu of the ability to do things together. My hope is that there will be open-ended virtual world spaces with user-generated content that allow all ages. We already know that's where the best

kinds of learning takes place. I mean on both sides. I could learn so much from him that I haven't been able to. For me it's critical that I know what he's doing.

People express to me concerns about, "Well, aren't you worried, you know that he'll be preyed upon in these online environments?" I'm not worried at all because he talks to me and I talk to him about what he's doing. Just like I would never say, "We'll never go to the mall because there're bad people in the mall." I mean he won't go to the mall without a cell phone and without me knowing when he's going and when he's suppose to meet back up with me. I think we use similar kinds of good sense when we deal with online environments. I wouldn't feel comfortable if he was on an online environment that I didn't know anything about. If he was going off into something that looked mystical to me, that would be much more worrisome as a parent. So that would be my advice: just learn about it. If you are worried about not being able to navigate it, ask your kid to show you because they can do it.

Lane: I would say that I agree with that. I have also found that many of the parents of people I know are not very understanding at all of how virtual worlds work. I guarantee you that if your child has a computer, they have talked to someone they don't know, even if you haven't caught them. It is going to happen naturally and it's best to get involved and make sure they have a safe experience and learning experience in there. I am lucky my mom has been so understanding of computers and how they work and not just, "Stay away from it. There're predators".

Elizabeth: I wrote a post for TerraNova saying it takes a guild to raise a child. I talked about an experience I had several years ago when Lane first tried War of Warcraft when he was about eleven years old. We were playing in a guild that's run by a friend of mine who is a venture capitalist in Japan. I was at work one day and I got an instant message from this friend saying, "I need you to log into WOW because your son is ninjaing loot."

Ninjaing loot means you really, really need something and are taking it when other people really have more right to it. Lane has the curse of being extremely articulate, which means for someone who only sees him typing he comes across as very much an adult but his behavior was also very much age appropriate. When you're eleven you really do need everything. Everything is critically important.

I was at first mortified to get this message from a respected colleague, but once that initial horror wore off and I had a chat with Lane about what was appropriate behavior, I realized that this was the most amazing neighborhood watch experience. Not only were there people that I knew and trusted watching him, but they were coming back to me and giving me a feedback loop. It was that same person who invited Lane into Second Life and gave him space to build on his island.

For me that would have been the ideal, for Lane to have been able to do most of his Second Life stuff working with adults that I liked, trusted and respected, that he could learn from rather than being walled off from them. I love bringing him to conferences like this. I saw him last night, you know, in the lobby scrunched around a table with ten other adults animatedly discussing something, and I thought this is not the same kid who said, "Well I'm not very good at talking to people." When he is around people that share his interest, regardless of his age, he blossoms. That is what we really need, more of this ability for all of us to do things together. ☺

"It's mostly good" - Why the Wrong People Are Keeping Our Kids Safe Online



Anne Collier, who served on the Internet Safety Technical Task Force, which released its report in January, talks about its findings and the negative reaction of the Attorneys General who formed the Task Force.

Podcasted on February 9, 2009.

<http://tinyurl.com/RezEd-org-26>

Background

I'm Anne Collier, and I run a non-profit organization called Net Family News, Inc. Net

Family News has two main projects: NetFamilyNews.org, a blog that started about 12 years ago -- long before there were blogs -- and ConnectSafely.org about safety on the fixed and mobile social Web.

ConnectSafely was a member of the Internet Safety Technical Task Force, which just completed its work at the end of this past year. The task force was formed by 49 State Attorneys General, with Texas abstaining, and MySpace. Its job was to come up with some ideas for child protection in terms of technology. Basically, what people might find interesting from my perspective is that the Attorneys General came up with a prescription for child safety online before there was any kind of diagnosis. Their prescription was age verification technology.

There were two advisory boards in which researchers were represented: a task force Technical Advisory Board made up of this country's top computer scientists and technology professors, and a Research Advisory Board, formed by key researchers in the fields of online safety and crimes against children. These two advisory boards accomplished a great deal. They came up with a much fuller picture of both the needs and potential solutions - a snapshot of where we are right now in this society, both in terms of technology and

the realities of children's online safety.

The Problem with Age Verification

Age verification is not a useful solution. In Europe, the European Commission just came out with a report in September that showed two very solid age verification schemes in the United Kingdom [UK] and Germany that were good for some purposes -- in blocking UK kids from gambling sites, for example, and in blocking German kids from some sites with adult content and other types of inappropriate content online in Germany. However, the EC also found that young people could just go elsewhere. They could go to servers that based in other countries, for whatever they wanted to do. Age verification doesn't work in an international medium that can't be regulated the way mass media used to be able to.

There is also a huge privacy issue. A significant problem is that there have been widely reported cases of data breaches in the UK involving minors' data, which could happen in the U.S. as well. Wherever you have a database, you can have compromises. It would not be good for children to have all of their personal information in a national database. That would be like fly paper to identity thieves, I was told by the FTC. So there are some serious privacy issues in even considering age verification. The technology is in place, but we do not have children's data anywhere in a database that the technology would have to check against. There would have to be some sort of national mandate for collecting and preserving children's personal information in one place. Parents deserve to know of this risk to children's privacy.

Major Findings and Recommendations

There were businesses and then there were the NGO's, or nonprofit organizations like ConnectSafely, on the Task Force. These members were advised by the technical and research advisory boards. The report summed up and what the researchers had found. One of the major accomplishments of the Task Force was that it pulled all online safety research to date into one place and summarized it.

“Age verification doesn't work in an international medium that can't be regulated.”

What that research found was disappointing to the Attorneys General, actually, because it showed that the online risk that the vast majority of young people face is cyberbullying and harassment, not predators.

“It showed that the online risk that the vast majority of young people face is cyber bullying and harassment, not predators.”

In fact, the research shows that only a tiny fraction of online youth are at risk of predation as a result of online activity and not all children are equally at risk of predation. A child's psycho-social makeup and family and school environments are better predictors of risk than any technology a child uses. So these are not findings that fit into the package, the report that the Attorneys General were looking for. In fact, they are now, in many different ways, using their platform to try and discredit the research that the report summarized.

The report said that no single technology is going to keep all children safe. I think what that reflects is that increasingly the web, especially this more and more social web, which is highly interactive where people upload just as much as they download, is no longer just hyperlinked documents, hobbies and interests, but hyperlinked people. When you have all human life reflected online, you have a great deal of complexity. You have all kinds of young people, including at-risk teens, as well as teens that are just conducting their lives in a healthy way, with some pitfalls here and there. What you have in the online space is really much more about adolescent behavior and development, identity exploration and risk assessment, all of which are completely developmental for teens.

Then you have crime. I think one of the problems, at least in our country, but probably all over the world, is that the online safety field grew out of a law enforcement need. You first had child porn hotlines in multiple countries and then that eventually led to missing children and exploited-children issues being addressed by law enforcement, which is all very much needed. It was those smart cops who were sort of filling a void, going to schools and talking about online

safety. These cops have expertise in crime but not adolescent behavior. This was really beginning to shape the public discussion about children's online safety. Crime emerged as the major focus of a field that really needs to be about life and child development.

The research was about crime for a long time. It wasn't about social media and what young people are doing with social media, which are fascinating and amazing things that really need to be looked at. There was this marvelous \$50 million initiative by the MacArthur Foundation that funded, in part, some great research out of Southern and Northern California that really looked into qualitative research -- into what's going on in families, schools, after-school programs, in the music world and what teens are doing, creating and producing online -- that is really positive. This research, however, has only recently emerged. There has been a vacuum of information.

There's this huge disconnect between adult perceptions and what's really going on. I think it's a bit of a tragedy, but I also think it's temporary because the digital natives will be parents in no time at all, and therefore this is a temporary transitional sort of problem. I have to say I looked around the room when I was sitting in one of these Task Force

meetings in the fall and I thought, "Wow, there are all these adults, all these baby boomers, sitting around in a room talking about something that we barely understand, with no representation of youth."

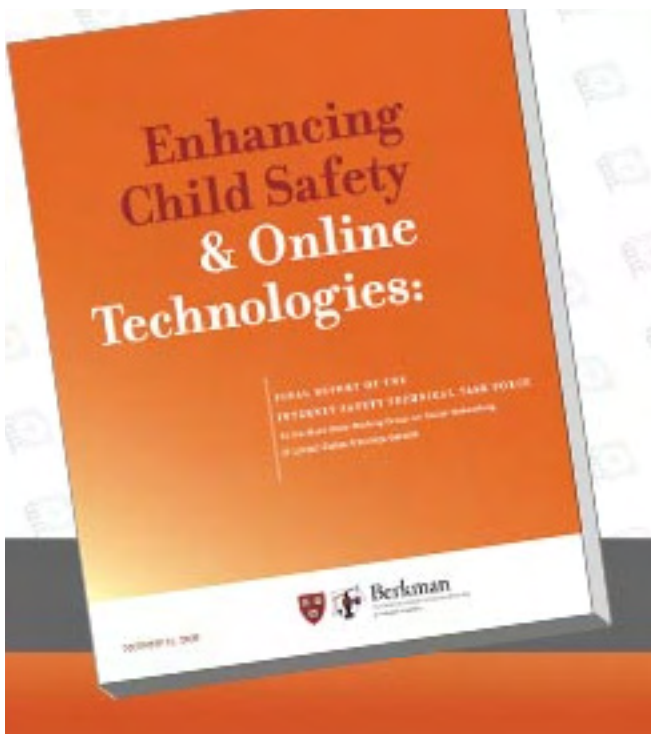
“Crime emerged as the major focus of a field that really needs to be about life and child development.”

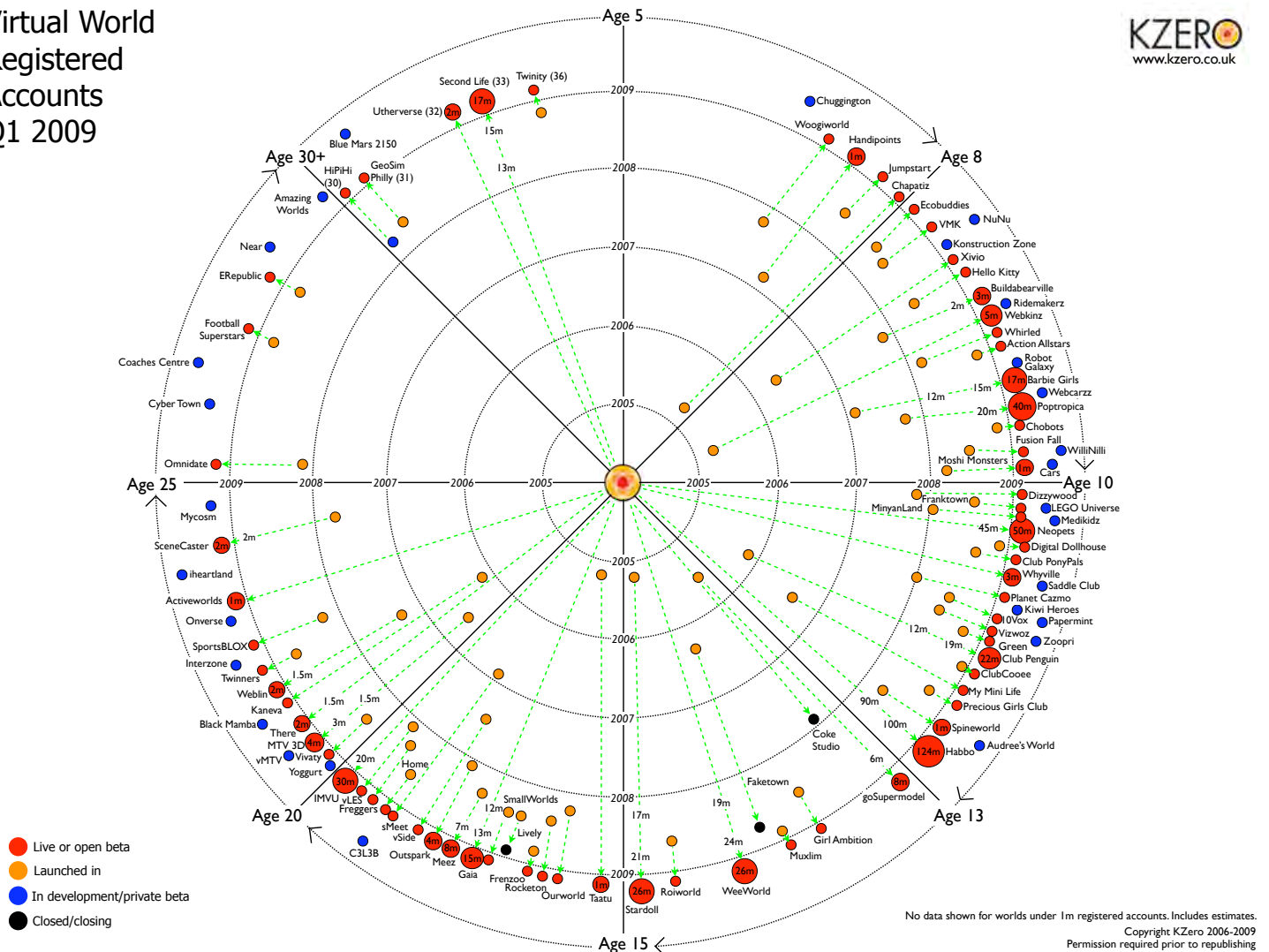
The solution that some of these adults have come up with is to card every user at the door of a social network site. The focus has been way too much on MySpace, and a little later on Facebook, and they have done pioneering work in the child-protection area. It's as if there's very little understanding that there are hundreds, probably thousands, of social network sites and they are worldwide, so if they [children] got carded at the door of a U.S.-based site, they could go elsewhere. And children socialize using many kinds of sites, technologies, and devices -- including but also beyond social network sites. It was like, this does not compute! What is wrong with this picture? Who does this protect? We really need to start to broaden the discussion and start seeing this space as a mirror of human life, so that we can start looking at the positives and neutrals, as well as the negatives.

Future Discussion on Protecting Youth

I really would like to see the discussion be fact-based, rather than fear-based. I have blogged about the Task Force report, and I may have over-stated a bit when I said we were at a crossroads now. We have an opportunity to start looking at the facts -- they are well-summarized in the report -- but the reaction, unfortunately, has been disappointing. The media coverage was pretty good, but the reaction on the part of the people with a very large platform, the Attorneys General, was to discredit the facts. We do have an opportunity, here, and I think we have to keep plugging away; start giving more of a platform to what is really going on online.

Since it is a lot like human life itself, it's mostly good. 





This chart, produced by KZero, a UK based market- research firm, shows the number of users with registered accounts in virtual worlds. As shown by the chart, the majority of registered virtual world users are in the 10-13 age bracket, followed closely by both the 8-10 year-olds and the 13-15 year-olds.



Online Leadership Program Professional Development Services



Why Global Kids?

Global Kids, Inc. is a nationally recognized leader in using digital media to promote global awareness and youth civic engagement. Global Kids' Online Leadership Program (OLP) integrates a youth development approach and international and public policy issues into youth media programs that build digital literacy, foster substantive online engagement, develop resources for educators, and promote civic participation.

Global Kids provides expert training in integrating technology in a variety of areas, including:

- Youth Media Production
- New Media Literacy Development
- Technology Based Youth Development
- Experiential Distance Learning
- Issue Based Gaming Curriculum
- Use of Social Media Tools in Education
- Technology Enhanced Service Learning
- Workshop Design and Facilitation
- Educational Uses of Virtual Worlds
- Civic Engagement through Technology

Global Kids Online Leadership Programs

Global Kids can customize a number of programs to be run by GK staff or, through professional development and technical assistance services, staff at partner organizations.

Playing 4 Keeps Capacity Building Program

Since 2002, Global Kids has been a leader in the use of online games to promote global awareness, engaged citizenship, and 21st Century Learning Skills. Through *Playing 4 Keeps*, Global Kids trains urban youth to develop games about important social issues. In 2009, Global Kids launched the Playing 4 Keeps Capacity Building Program, which supports institutions to run their own games-based learning programs. The program is currently supporting fourteen Neighborhood Network sites in Boston and sites throughout the New York City Public Libraries.

Youth Produced Digital Media

Global Kids recognized early the Internet's potential for engaging young people in learning about the world and devising strategies for addressing issues of concern. Global Kids is a pioneer in creating, testing, refining, and sharing programs and curricula that engage youth in productive online activities. GK teens annually produce sophisticated media pieces, including animated films and educational games, and are skilled users of virtual worlds, blogs, and social networks, all of which are designed to educate and inspire their peers to think critically, broaden their horizons, and act responsibly.

Virtual World Program Development & Branding

Global Kids offers a wide array of consulting on usage of virtual world for educational and pro-social applications. This includes educational program design, development and management, live event production and simulcasting of real world events and staff training and capacity building for application of virtual worlds.

Focused Professional Development Workshops

Global Kids will facilitate professional development workshops on best practices in such topics as interactive, experiential learning, team building, leadership development, and others, and can also demonstrate how to integrate a global perspective into the required curriculum, as well as after school programming.

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